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THE CAPE

MONTHLY MAGAZINE.

Native Labour and Native Policy.

This, if not the greatest and most difficult, is one of the most important questions of the day. It is not a question that has arisen suddenly or unexpectedly, but one of long standing; it has been handled in Parliament annually for many years, and it is every day discussed in our newspapers, by editors and others. From these writers and speakers we have had many representations respecting the insufficient supply of labour, suggestions for increasing the supply, or how it may be done, and so on, without much being accomplished thereby to effect the object aimed at. The opinions and views of public writers and public speakers on the subject are diverse and varied, both in regard to the description of labourer best suited to our requirements, and the measures that should be adopted for supplying the requisite number; the only platform upon which all stand agreed is this, that the prosperity of the country is retarded for want of a sufficient supply of labour, and that something ought to be done to remedy the evil. More than ordinary pressure was brought to bear upon the Government during the last session of Parliament on this subject, and people appear to have made up their minds that an effort will be made soon to introduce a large number of labourers from some quarter or other, and, perhaps, from several quarters; and as the effort will cost money, and the future well-being or otherwise of the Colony will depend much upon the suitability of the people introduced, it behoves us all to aid in the movement in any way in our power, and particularly by affording information, if we can, as to the description of labour needed in particular localities, where it may be procured, and the measures that should be adopted by the employers of labour to encourage people to come to, and stay with them.

With this object in view, the writer of this paper proposes to make a few observations on the subject in the hope that others may be induced to follow the example, and give the public and the Government the benefit of their experience and knowledge of the country and its varied inhabitants, its wants and capabilities.

Years ago when all the stock of the country consisted of the ordinary Afrikander cattle,—the fat-tailed sheep, and the common goat—

when the price of wheat was three shillings a bushel, and that of other grain low in proportion; when our chief, and it may be said, only article of export consisted of wine (such as it was) which the producer disposed of with difficulty, at a price barely sufficient to cover the expense of conveying it by oxwaggon for several days over the heavy sands between Cape Town and the wine producing districts; butter, sold by the producers and delivered at the sea ports for twopence farthing a pound; small quantities of tallow; a few hides and skins, and dried fish; the want of labour was not so much felt. Cattle usually grazed unherded, sheep required but little care, the money value of both was small, oxen sold at from fifteen to thirty shillings each, cows at ten to fifteen shillings, sheep at an average of about two shillings, and so on; and a few lost now and then did not count for much, or affect the owner particularly: he was, so to say, used to it, as eels are said to be used to being skinned. Wheat and other grain was only produced in small quantities, except in the immediate vicinity of Cape Town. Bad roads and low prices did not encourage farmers to produce more than sufficed for home consumption, if they resided at any great distance from the principal centres of population, which were the only markets. It was not then as now that every man, woman, and child in the community expects to eat bread every day. Bread was a luxury, and seldom indulged in by the ordinary Vee-boer, whose customary food was fat mutton stewed in fat, and washed down with a basin of sweet milk. In those good old times a couple of Hottentots with their wives ("Maiden" the Boers called them, in order to avoid regarding them quite as human beings,) and children sufficed for an extensive farming establishment, most of the farmwork being performed by the farmer and members of his own family. Who—the males dressed in leather "Krackers" and "Veldschoenen," made of skins from their own sheep and cattle, and tanned by themselves, and the women in "Linnabaay" or blue "Duivelsterk" frocks, with little or nothing under them to interfere with their movements, work came natural to them; the men did much to assist in the care of their flocks, went to the grazing "veld" every day after the midday nap to see that the herd was doing his duty, and to help him to bring the sheep and goats to the kraal in the evening; he drove his own wagon, made the kraals, &c., while the wife and daughter did the cooking, washing, soup-making, and such like. Now-a-days, however, when the ordinary price of an ox is £10, of a cow about the same, of sheep fifteen shillings; when on almost every farm there may be found animals of each description and of much greater value, such as imported cattle and sheep, and when the farmers and their sons dress in superfine broadcloths and patent leather boots, and the wives and daughters in fine linen, silks, and satins, and the usual extras in the shape of crinoline, hoops, dress improvers, panniers, and the numerous other articles invented by Parisian artists, to *improve* the natural figure, the case is altered, and servants are needed to perform the

work which in olden time appertained to the "Baas," the "Vrouw," and the "Kinderen" of the family. A fashionably dressed woman of the present day could scarcely squeeze herself through the door, much less into the "Kookhuis" of the olden time; and hence arises a necessity for more roomy houses, larger doors, better kitchen arrangements, &c., and more servants. But, it seems, the *more* servants are not obtainable, and from the evidence of almost everyone, we are forced to the conclusion, that while the need for increased labour has been advancing during the last thirty or forty years, the supply has been getting smaller by degrees, and *not beautifully* less. How is this to be accounted for? It is an ordinary maxim that supply will follow demand, that, where there is a real demand and a willingness to pay a fair price for the article required, the supply will soon be at hand. When the demand for superior articles of dress arose, there was no lack of supply; but when we want more servants, and, in many cases, a better discription than the ordinary native, these are not to be had! Is this a result that could not have been avoided, or has it arisen from mismanagement, neglect, prejudice, injustice, or other *mistakes* of our own? Have we done all that we ought to have done, and might properly and profitably have done, to *induce* the "natives" to come to, and stay with, us, in the capacity of servants, and to elevate themselves, while so serving, into higher and better positions? If we have not, if we have omitted to improve the occasion, when opportunity offered, for our own advantage, and for the advantage of those whose services we desired to retain and so much needed, is it too late to turn over a new leaf, and to mend our ways? These are questions which it behoves every employer of labour to ask himself, as also every one who desires to see our fine country advance in material wealth and prosperity, and the natives by whom we are surrounded turned from an element of danger into one of usefulness, and made co-workers with us for the general benefit of the commonwealth.

In the olden days, of which I have spoken, the only available labour in the country consisted of slaves and Hottentots; the latter were gradually and visibly diminishing from various causes, and no increase to the former was permissible (except the natural increase). Yet we went on from year to year, and have gone on up to the present time, without making any decided or effective effort, or even laying the foundation of a system by means of which to *ensure* a sufficient and efficient supply. We saw the Hottentots being drawn away from the employers of labour to those more congenial places for them, the Mission Stations, the Kat River Settlement, Independent Griqualand, the hunting fields beyond our northern borders, and many of them destroying themselves by over indulgence in intoxicating drinks and other vicious habits and customs. We saw the slaves emancipated, and knew that large numbers of them would immediately emerge from the position of labourers to that of employers of labour. Yet we folded our hands and looked on, contenting ourselves with

merely calling upon the Government to help us, and abusing the Government when we did not get what we wanted, and what we had neglected, opportunities for supplying ourselves with. And whenever the Government did adopt measures, having for their object to draw supplies of labour from other places, or to induce labourers already here to remain, such as the immigration schemes of Sir George Grey, the guiding of the streams of starving Kafirs, by which we were inundated some years ago, into channels through which they should be conveyed to places where their labour was most in demand, the granting of certificates of citizenship to Fingoes and other natives, who were born, or who had resided for many years within the borders of the Colony, to protect them from being mistaken for fresh comers, and thereby encourage them to continue to reside among us—great opposition to the measures has been stirred up by men who, believing themselves to be those whose opinions should guide the affairs of State in all things, never rest until they have checked, or put a stop to, any measure not originating with themselves. These men, by writing and publishing long and virulent rigmaroles in the newspapers, in which they appeal to men's passions and prejudices, can generally in this country hook on a good long tail, and then, by button-holing M.L.A.'s or M.L.C.'s, manage to damage, or impede the best devised plans of others. It is not improbable that many thousands of the Kafirs that came into the Colony during the starvation years might have been *induced* to remain permanently among us if we had adopted measures calculated to attain that end. There was nothing left in their own country to draw them back to it. We threw away the opportunity, and most of them either went back to Kafirland, or to native locations, or settled down on waste Crown lands, where they became thorns in the sides of the farmers of the neighbourhoods.

Most employers of labour in this country have a predilection for native or coloured servants rather than for white or European servants. The reasons ordinarily assigned for this are that it costs money to import white labourers; that they expect to be better housed and better fed than coloured people; that they require higher rates of money wages; and that in a majority of cases they soon raise themselves to the position of masters and employers of labour instead of remaining labourers. The last objection is, in the minds of many, the greatest. It is undeniable, and it is no use to disguise the fact, that a large number of persons amongst us who employ or desire to employ labour, that hold to the opinion that there ought to be a class of people who should not be permitted to be free men and free women, who should be forced by coercive laws to work for others on such wages as those others choose to pay; and that, however well members of this class might be able to maintain themselves and their families without going into service, they should, nevertheless, be compelled to serve. The people who hold these views do not see, or if they do they do not admit it, that this would be slavery in disguise. These people constantly hold up to view, and expect others

to admire, as they do, the laws and customs of the neighbouring independent States upon the subject. The law-makers of those States say there are those who understand native character, who know what sort of laws should be enacted to regulate matters between master and servants. You will not there see, as you do here every day of your life, a black *brute* pass a white *man* without taking off his hat (if he has one on), and saying "Dag Baas." They are there taught to know, and made to feel, the vast difference between a white skin and a black skin, and to conduct themselves accordingly; and until we adopt the same system we shall never make anything of the natives. These people have no idea of holding out *inducements;* their only notion is *compulsion*. The natives must be *made* to work, and not be *allowed* to live in idleness; and he must enact laws to effect this. These are the ideas entertained by a large number of our fellow colonists, perhaps a large majority of them; and, in my opinion, it is the existence and operation of these sentiments, added to the knowledge and feeling that they are scarcely regarded by us as human beings, that prevents the natives, or large numbers of them, from coming to us or remaining long with us if they do come. There are no sympathies in common between us; we do not encourage, and would scarcely permit, such sympathies to exist; we should be ashamed of ourselves; and, indeed, be in danger of losing caste if we entertained other than feelings of antipathy towards a savage Kafir. As well might a high-caste Indian venture to eat a piece of pork as we dare to entertain feelings of friendship and sympathy for or with the "Nigger." Yet we expect them to be delighted to come and work for us! No doubt the coercive law system, and the antipathy feeling of white towards black, is carried to extreme in the Orange Free State and the Transvaal Republic; and those who admire those laws and feelings may go there and have their fill of them. In some parts you may see a mistress, who does not want her female servant to remain on her premises during the night, send her with a note to the gaoler, and have her locked up in gaol for the night, and be returned to her in the morning; possibly, if the mistress so desires it, after the administration of a dozen lashes or so on the bare back, if she is at all disposed to be, what among the Boers is styled, "parmantig," or "brutal." They flog women there, and hold that to be the "right" treatment to make good servants of them. Whether a woman is likely to be a *better* domestic servant for being locked up in gaol at night, perhaps in company with a lot of men, and flogged in the morning before returning to her work, than she would be if her mistress regarded her as a human being, and *exerted* herself to improve the mind of her domestic, is open to argument. No one will deny that the ordinary native, in his or her natural state, is not low and depraved. No one will say that masters and mistresses have not their tempers and patience often sorely tried by them. Still, if we must have, or desire to have, such people in our employ, shall we attain that object, and subserve our

own interests best, by doing our utmost to keep them in their low and depraved condition, or by exerting ourselves unitedly, systematically, and determinedly to raise them to a higher level by opening and expanding their minds? This is at least worthy of consideration. If the coercive laws and the *better* knowledge of our Orange Free State and Transvaal friends had the effect of securing for them a sufficient supply of the sort of labour they require such a result might be an excuse for us to adopt their mode of treatment; but it is notorious that such is not the case. It is equally notorious that they are far worse off for servants than we are. All who have visited those countries know this to be true, and know that there is scarcely one respectable coloured female servant to be found in either State. (What respectable female would live in a country where she is liable to be sent to prison and locked up at night merely by request of her mistress conveyed to the gaoler?) There are exceptions to every rule. I mention this as the rule. Some admirers of the coercive system who have not been in the Independent States may entertain doubts on this subject, and fancy that this is not a true picture. To such people I would say, visit the States, or, if you can't do that, subscribe for, and read their newspapers. For their present edification, however, I transcribe the following from the *Transvaal Advocate*, of the 16th of last month (November, 1874), being reports of speeches delivered by members of Volksraad, in Raad assembled, on the subject of "labour:"—

THE PASS LAW.—LABOUR.—This law, having been previously postponed, was now brought before the Raad. His Honour was told this law had been postponed till to-day, the State Secretary having said that His Honour wished to propose some alterations. His Honour said that the State Secretary must have misunderstood him. That he had intended to alter the whole native system, but that he was prevented by sickness; and besides the alteration of a whole system was not the work of a few days. He thought if the Raad deemed some modification necessary they should take the matter into consideration.

Mr. Munnich said, that his reason for submitting the motion he was about to propose was, that the law as it stood, entirely failed in accomplishing the end in view. Here, about Pretoria, he saw some working coloured people, but in the neighbourhood of Potchefstroom, the farmer had absolutely no servants, because the Kafirs will not work. He did not propose to go over the whole law, and thought it was sufficient simply to raise the price of the "pass," for the present one which entitled a Kafir to pay £1, and thereon to get a pass which entitled him to roam about the country or sit down in a town, and work or not as he liked, was ridiculous, especially in the towns and villages. The Kafirs seldom hire themselves for more than two or three weeks; by that time they have earned enough to buy a "pass," and then wanders about to the annoyance of everyone; and meanwhile the white people must protect them. He would propose to fix the price of a "pass" at £6 or at £7 10s. Mr. De Vries said, that when His Honour the President, introduced the present law in 1872, he said it was an "experiental law;" and when in 1873 it was again before the Raad, His Honour said, it would be better to wait for another year to see how it worked. He (Mr. De Vries) thought it was now quite clear the law did not "work," for Kafir circumstances had got worse instead of better. What would our progress benefit us if the farmers cannot get labour given to them? What would it benefit if the Kafirs are our masters and we must dance to their whistling? Upon machtmaal occasions,

one could almost weep to see that even the young girls, daughters of the farmers have to lead oxen, and their mothers take the whip to drive, while the Kafirs stand about and laugh at them! He, the speaker, thought the time had come, when the Kafirs must be made to work, even as white people are obliged to do. He did not desire to oppress any Kafir; but he did desire that if a Kafir preferred to sit in his hut he should be made to pay for the privilege, or otherwise go and work. He thought that the only way to effect this was to raise the charge of the "pass" to £5 or even £7 10. Mr. Prinsloo pointed out, how different constructions of the law are given by those to whom is entrusted the carrying of it out. Further, he affirmed that there were many Kafirs who will neither work nor pay for a pass, and asked what was to be done with them? He contended that in reality the Kafirs had more freedom than the white people; he would willingly pay £3 to be free as the Kafirs who paid £1. He also desired that those in the towns and villages shall be obliged to wear clothing. At the time, when he (the speaker), got only 15s. for a muid of corn, he was better off than now, when he sometimes got £3 for a muid, for then he had working people, but now none. The inhabitants of the towns consequently suffered under this law. Mr. Smit called attention to former memorials on the subjects of this law. One declared that it was "impossible for the memoralists to agree with it." Another prayed that the number of free passes which a farmer might issue to Kafirs be reduced from ten to five,—and argued against the low charge for a "pass." A Kafir could shoot two quaggas, and their skins would bring him enough to buy a "pass." He, the speaker, would very much like also to be able to pay £1, to be so free that none could in any way interfere with him, in the street or elsewhere.

Mr. Kock said, that while it appeared that there was no remedy but raising the price of the "pass," he still saw great difficulties in the way. In the towns and villages it might work. But the Kafirs who work for the Boers are out of town, and often at a great distance from the field-cornets. The result would very likely be they would go to foreign countries, and there earn their £5 or £7 10s. to pay for the "pass," allowing them to do without work here. Or they would simply go beyond the borders to their different captains, and strengthen them, and in either case the farmer would lose their services. He was not prepared himself to propose any better remedy, or one more likely to be carried out. Some people spoke of special "district laws." These also would fail; for the Kafir would not go to any district whose local laws were in the least oppressive. He apprehended that there was much about the same difficulty in carrying out this law as the "ostrich" law, and he (the speaker) repeated now what he said during the discussion thereon. The only way to get our laws properly enforced, was the establishment of a strong border police. Even if every burgher had to pay £5 a year for it, it would still be profitable, for then our laws could be enforced on the borders, and the farmers would get servants.—[Well spoken, Mr. Kock!]

Mr. Dreyer could not understand how the last speaker could connect the question of a police force with the pass law. He (Mr. Dreyer) would fix the price of a "pass" at least at £7 10s. And as to the Kafirs in service, let them pay for their huts—a "hut tax" as they used to under the old law. He wished the law to be sent back to Government.

Mr. Holtshausen thought that the law did not answer, because it was not enforced against the contumacious. For instance, there resided in his district a petty captain named Malagas, who absolutely refused to comply with the pass law. He thought the Kafirs should be compelled to pay the £5 or £7 10s. even if the burghers had to buckle on their bandoliers, and compel them thereto by force of arms. He considered it too soon to talk about a police force, and that it would be too burdensome for the burghers. Put things first into good order and then establish a police to keep the good order.

Mr. Buhrmann agreed in the main with Messrs. Munnich and de Vries, the proposer and seconder, but would not like to see the Kafirs actually in service taxed. He was against sending the law back to Government.

Considerable further discussion followed. Some wanted the price of the passes lowered; and thought it would be well to come to an understanding with the

Kafir captains, to the effect that all the young Kafirs from ten to twenty years old should be placed under the protection of the farmers, and be by them taught to work [! ! !]

The law was read at length; also memorandum by the Chairman from His Honour the President, mentioning that the Estimate of the Revenue of Kafir passes for the first year was £500, while the actual receipts amounted to £1,500, the second year to £2,000; whereupon the Raad adjourned.

In the afternoon the discussion was resumed in about the same spirit as the morning, it being at length resolved to refer this matter to a Committee of three, Messrs. C. Joubert, Holtshausen and Prinsloo being chosen members of the Committee.

This will probably convince most people that the "better" laws and "better" knowledge of the Boers how to treat natives have not done much good for them; but that, notwithstanding, they seem determined to go on in the old way. Clearly they themselves see, and believe, that *they* can only obtain native labour by force, and that up to the present time they have failed to obtain it even by the exercise of force. Will they do better by extending the coercive system? Some members of the Raad say "Yes;" but they arrive at the conclusion by somewhat curious reasoning. Before the law was passed which requires all natives living in the country, or who want to pass through it, to pay £1 for the privilege of so doing for not more than one year, they were better off for servants then than they now are, and, therefore, instead of repealing the law, which has worked injuriously, it is proposed to extend it, and to require natives to pay £7 10s. a year instead of £1 for the privilege of residing in the State, whether in service or not. Ordinary minds might fancy that if the exaction of £1 a year has tended to reduce the number of servants obtainable, the exaction of £7 10s. a year will have a similar effect to a greater extent. That is, however, evidently not the idea, and possibly the people who advocate the extension have their own notions about it. The £1, they say, is easily raised; a man has only to shoot two quaggas, and sell their skins to raise the money, and then to be a "free" man for a whole year. It must, doubtless, be more difficult to raise £7 10s.; and to accomplish that the native might be compelled to get an advance from a farmer in exchange for an engagement of service; and that done, it would take a long time to work off the "dead horse." There is said to be a law in force in the Transvaal which provides, that in the event of disagreement between a master and his servant about wages, and the master is sued, no servant shall be able to recover a higher rate than five dollars, or 7s. 6d. a month, and the laws are very strict against servants who do not serve out their full time; so what with being able to recover no more than five dollars a month, and the certainty that there would be many deductions to be made from that before £7 10s. could be worked off, a man who obtained such an advance would be for years in a state of semi-slavery; he could, indeed, never clear himself if he has to pay £7 10s. annually, and must remain in perpetual servitude after obtaining the first advance, or make a bolt of it

out of the country. We may, therefore, safely conclude that if the higher rate of charge for permission to live in the country be decided upon, the effect will be to diminish and not to increase the number of coloured people who will enter into service engagements. Another proposal suggested in the Volksraad was to enter into arrangements with the native chiefs, by which they should engage to place all their young people between the ages of ten and twenty years under the "protection" of the farmers, to be by them taught to work! Another suggestion made was to enforce the Pass Law by requiring the burghers to buckle on their "bandoliers" for the purpose. The member proposing this stated that there was a petty chief in his district who absolutely refused to comply with the Pass Law. The speaker did not say whether or not the chief and his people were living on their own lands—lands which were theirs or their tribe's before the Boers went into the country, as is most probably the case. These matters are mentioned, not for the purpose of raising a laugh at the expense of our independent neighbours, but to show our own people that the better laws and better knowledge of our friends in the States do not enable them to get or keep the natives as servants, and that bad as our laws are *said* to be on the subject, we are at least as well off (I believe *very* much better off) for servants as our Transgarepean brethren.

Owing to the great difficulty, and apparently the impossibility, of procuring an adequate supply of labourers from the native tribes of this continent, we have been proposing to follow the example of Natal and send to India, or even to China, for labour. Many, however, doubted the advisability of this, and time has been taken for consideration. I do not know much about the relative value of such people as labourers, and of our own natives for our particular wants, but I much doubt whether Indian coolies or Chinamen would make good shepherds; and as for physical strength—to work on our railways, in our vineyards, on our cornfields, or in dam making—I should consider one Kafir or Fingo equal to at least two coolies; indeed, I fancy a Kafir or Fingo woman would beat a coolie hollow in garden or field work; and I am disposed to think that Kafir and Fingo women, and children too, might be *induced* to work—as Irish and English women do at home in harvest time—for fair wages and kind treatment; but before this can be brought about—by *this* I mean the ability to obtain an ample supply of labour from the swarms of natives on and beyond our borders—some changes must take place, many of which—if not all of them—may be effected by ourselves if we go to work with a will.

Before alluding to the changes which I consider to be needful, in order to open the way to the labour market and to secure the needful supply, let me say another word or two about the Indian and Chinese coolies. If we go in for them, we know that we must pay, in addition to their wages and food, for collecting them in their own countries, for bringing them here, and *for sending them home again*,

which would probably amount to something like £30 each, so that, if their services are engaged for only three years, we should pay at the rate of £10 a year for each man, during periods in which he is doing nothing for us. Do we not want permanent and continuous labour? If we do, should we spend money on people whom we undertake to send away again at the expiration of a specified time? We have not yet tried the experiment of spending money to bring in, under systematic arrangements, the natives from beyond our borders. I do not overlook, what I am very glad to see, that we are getting a few Fingoes from the Transkie for public works, and I hope that this is one of those small beginnings from which great things often flow. We ought, however, not to rely too much upon the efforts of the Government, or expect very much from that quarter, unless we second those efforts heartily by holding out inducements to the natives to come in, and by encouraging them to remain when they are in. If great things are to be done, the *people* must do them, the Government leading the way, or co-operating.

Among the changes that I hold to be needful before we shall secure a regular and sufficient supply of labour from the swarms of natives beyond our borders, or induce the best among them to come to us, the first is, a thorough change in our own feelings towards the black races. We must cease to regard them and treat them as a sort of animal, nearer akin to brute beasts than to human beings; we must make up our minds that they are human beings, and as such may be, as the white races have been, raised from the depths of savageism to that higher state of usefulness, into which we have been raised ourselves. We must abandon our present practice of refusing to allow coloured children to mix with white children in our public schools merely because the skins are not the same colour, and we must also drop the present practice which prevails to a large extent throughout the Colony, and more generally in the neighbouring States, of refusing to allow coloured people to worship God within the same buildings as the white people. We must *attract* them to us by showing them that while we desire to have their services we also desire to elevate them to our own level. Then farmers who employ native labour should endeavour to attach them to themselves and to their farms, by permitting and encouraging them to cultivate small gardens for their own benefit where gardens can be cultivated. I would also recommend that farmers should put up cottages for their native servants, and not allow them, if it can be helped, to live in "Kafir huts." This may not be generally practicable, but well-to-do farmers can accomplish it, and, I believe, it would tend to improve and to elevate the servants. Attention should also be paid to their clothing; they should be encouraged to clothe themselves decently, and to appear in clean clothes once-a-week, at least on Sundays. Many other suggestions might be thrown out, but I fancy I have written enough on this head to be laughed at by our own "experienced" farmers, who "know better" how to treat natives than I do. I have formed

strong opinions on the subject, and don't mind my paper being ridiculed a bit. I hold that we stand in need of the labour of the native tribes, and that we shall not succeed in getting it unless we, by our own conduct, attract the people to us, instead of repulsing them. Many instances might be mentioned by way of illustration exhibiting the extreme antipathy entertained by the white man towards the black, merely on account of colour. A black man may be a most respectable person in every way, well to do, well educated, and scrupulously clean in person and dress; yet, if he went to the farm homestead, or an ordinary Vee-boer (where cleanliness is not always strictly observed), he would not be admitted inside the house as a guest, but would be expected to stand outside, take off his hat, and say, "Dag Baas," or "Dag Nooi," to each white man or white woman, or even children, that were near him. These feelings of antipathy of the white man towards the black are not disguised, but openly avowed, and often pointedly shown. Take a couple of them: A Dutch church had been erected at a newly established village at a heavier cost than the congregation could find ready money for, and there was a debt on the building af £1,500, which there was a difficulty in raising. This being known, a well-to-do coloured man living in the vicinity offered to lend the money without interest, for any period required, on condition that he and his family might have a pew assigned to them in the church. He would be satisfied with any position; the pew might be in one corner of the building, and be screened off by a curtain, if so desired; he would not object to exceptional treatment, all he wanted was to be allowed to attend the church services with his family. The offer was refused! A gentleman and a Dutch lady entered into a discussion respecting the probability or possibility of black people being admitted into heaven; the lady did not believe it to be possible, the gentleman took the opposite view, and the discussion ended by the gentleman asking the lady what she would do if she were in heaven and a black person arrived there; her answer was at once and decided, that she would go out. These antipathies are not alone entertained by the Dutch, but by English people also, and are in many cases entertained quite as strongly, and the coloured people know that they are entertained.

But, other changes are needful besides a change in our own feelings and treatment before we shall succeed in attracting a sufficient number of coloured labourers to us, and in keeping them with us for any length of time. These changes must be effected among the native tribes, and the sooner the better. Their laws, their customs, or many of them, their tribal organizations, and their system of government must be resolutely dealt with, and be superseded by a better form of government, and better laws; in other words, we must extend British Jurisdiction, and govern the people, not as at Natal, by upholding and continuing savage laws and customs, but by putting those down as quickly as may be, and establishing civilized laws and customs in their stead. While the savage laws exist, the people can-

not leave their tribes for lengthened periods with safety to themselves and families, or to their property, if they have any, for under those laws any property they possess may, for the faults of others, be confiscated during their absence, and their wives and children may be appropriated by others, as the Chief and his advisers may direct, or as the male relations of the woman may think fit. The existence of those laws and customs affect injuriously our labour market, while, on the other hand, they do not benefit anyone; our aim, therefore, should be to supersede them by a better and more generally beneficial code. There can be little doubt but that the Fingoes and also the Tambookies of the Transkei would readily fall in with a proposal to bring them under civilized jurisdiction. A few of the chiefs might not wish it, but they would acquiesce, if fairly dealt with, and properly compensated for any pecuniary loss they might suffer, and such an arrangement with them would pave the way for further extensions along the coast country towards Natal. To the northward beyond Griqualand we have several tribes anxious for the extension of British rule over them, but their boundary disputes with the Republics appear to stop the way. No such disputes exist beyond our eastern borders, and we may advance in that direction without hindrance. Vast numbers of native labourers go from the tribes living beyond the Transvaal to the Diamond-fields, but few, if any, remain there for more than a few months, and the reason usually assigned for that is the unwillingness of their chiefs to allow them to do so, as they are never certain that they will be free from attacks by the Republic for any lengthened period, and if attacked they want all their men at home. If British rule were extended over these tribes, their continual dread of attack would subside, as a similar fear has subsided in Basutoland, and the people would be set free to turn their labour to account for the benefit of themselves and others.

We are in the habit of thinking and speaking of the natives as lazy, and, in many respects, worthless beings, thievish, carless, dirty, and so on, and no doubt they have many bad qualities. Yet we require their services, and are willing to take them, and to allow our children to grow up surrounded by them and their children, if we can only get them at a low rate of pay. We are in the habit of considering that a low rate of wages gives us cheap labour—that is, that inferior labour and low wages is more profitable to us than good labour at higher wages. This, to say the least, is a subject open to argument; but this paper is already too long, and must be brought to a close, but I hope its publication will induce others, better qualified than I am to deal with the subject, to take it up, particularly that part of it which deals with the natives. My impression with regard to them is that while they live under and subject to their savage laws and customs, we shall not succeed in inducing many to take to steady labour among ourselves, and that therefore, instead of resting satisfied with abusing the natives for not coming to us, and the Government for not enacting laws to compel them to work (the

effect of which would deter them from coming to us), it would be better to devise means for counteracting the pernicious effects of their savage laws and customs. I believe that it is the operation of those laws and customs which in Natal prevents the natives from entering into the service of the "colonists." We have seen lately that in that Colony savage laws are upheld and administered by the Government, and that the Lieut.-Governor, in his position of Supreme Chief, has avowed, and acted upon the avowal, that the property possessed by individuals belongs to himself, and may be seized and appropriated at pleasure. What man in his senses, possessed of any property, would go away and leave it, and also his family, at the mercy of others? With a different law prevailing, a law under which individual rights of property, and security of person, are safe, it is not improbable that we should find the natives far more willing to leave their homes. It is asserted that since British rule has been established in Basutoland thirty thousand of that people go annually out to serve the White Man elsewhere, and that during last year they supplied our markets with A HUNDRED THOUSAND MUIDS OF GRAIN. A writer in the *Graham's Town Journal*, under the initials E. C. J., estimates that fifty-four thousand natives are working for us in the Cape Colony, in service or otherwise. The writer has evidently given considerable thought to the subject, and his writings bear evidence of his competency to deal with it. His estimate, in my opinion, is a very low one, still it tends to show that in the matter of native labour we are much better off than our brethren at Natal are, and as most of our labourers, or people who are working for us, belong to tribes in which the injurious tendencies of savage laws have to some extent been reduced—such as the Fingoes, Tambookies, Basutos, &c.—I am, I think, justified in believing that our better supply of labour may be attributed to that circumstance. R.

The Dragon Fly.

(FROM THE FRENCH OF THEOPHILE GAUTIER.)

I.

Over the heath, all wet with dew,
She flew;
Over the many-thorned sweet-briar,
Over the woods, all dark with shade,
And strayed
Where hedges from the road retire.

II.

O'er Marguerite's young head she went,
Who bent
Her pensive forehead to the ground ;
Over the rye, whose waves of green
Are seen
Tossed by the breeze that sports around.

III.

Over the meadows, over the hill,
That still
Bends t'wards the flower-spread vale below ;
Over the elm-tree, over the heath
Beneath,
The Dragon-fly flits to and fro.

IV.

Carlessly flitting here and there
In the air ;
And if amid the fog awhile,
Slowly ascending to the skies,
She flies,
She gleams there like a fairy's smile.

V.

Then, flying near the alder trees,
She sees
Gay flies that sport on buzzing wings
A circling dance ; and she, as gay
As they,
Whirls round, like them, in airy rings.

VI.

Soon, straying in her merry flight,
The light
Flashes, as from a jewel's beam
Or drops splashed from the hasty brook,
Now, shook,
They trickle back into the stream.

VII.

In flight more rapid than the breeze,
She sees
Her image mirrored in the waves ;
And laughs to see the willow's trunk
Deep sunk
Within the stream his roots that laves.

VIII.

Near where the water lilies bend,
And lend
Their beauty to th' enamoured brook,
Who murmurs, as he rolls along,
A song
Of love, and hastens to a nook.

IX.

Where the mists linger as they rise,
Summer skies
Smiling on billows bright as glass;
And suns, than India's not more dim,
There swim,
And skimming swallows dip and pass.

X.

Murmuring woodlands, meadows cool
And full
Of odours, lakes of silk, blue hills,
And skies where bright-lined clouds sail past;
And vast
Mountains whose height the fancy fills.

XI.

Behold how wide is the domain,
No chain
To stop her, wheresoe'er she'd stray;
Nothing to do but to fulfil
Her will,
In green and rose-tints gleaming gay.

XII.

In narrow circle, strict and staid,
What maid
Has not wished, twenty times, to be
Floating and flying, free and fair,
In the air,
A Dragon-fly at liberty?

B. M. R.

A Mirror of the Cape.

From time to time various journals have been started at the Cape, only to perish from want of public support. Edited with undoubted ability, and full of excellent matter, appeared, in 1848, the *Cape Town Mirror*,—but it only reached one volume, a copy of which is now before us. From this it would appear that many of the more striking events in our colonial history have been repeatedly forecast by our literary predecessors, and that it takes at least twenty-five years before a project can be realised, or a conception brought to its full fruition at the Cape. Such subjects as Wool and Wine, Climatology, Capital Punishment, Self Dependence, A South African Federation, Emigration, Cotton Associations, The Philosophy of Banking, and even the Gold Mania, and Responsible Government, are included in the list of essays and reviews contributed to this journal; while the Poet's Corner is full of capital verses on a variety of local subjects. We propose to glean some facts from these papers, and, dipping at random into their pages, to help ourselves to some very remarkable productions of the colonial muse. Of these latter, the most striking to our mind are a series of verses, narrating a vision of the future of Cape Town, as it appeared to a poet, who, having ascended the Kloof Road in 1670, looks down upon the town, and fancies himself to be standing in the shoes of Van Riebek while engaged in planning out our delectable streets, some two hundred years ago. As the dream of a prophet it has certainly been remarkably fulfilled of late years, and deserves to be recorded in the columns of Mr. Berks Hutchinson's *Spiritualistlic Medium!* After a glowing apostrophe to the *genius wei* and the surrounding scenery, the poet twangs his lyre, and dreams of the day when the following things shall come to pass: —

"Then like birds in summer harbour,
Sheltered each in artful nest,
Safe within the channelled harbour,
Ships unanchored here shall rest.

Gathered fleets from every ocean
Here shall ride secure from harm,
Shielded from the storm's commotion
By the Mole's embracing arm.

Then the land shall be indented
With great causeways, far and wide,—
Where, in cars not yet invented,
Men with arrowy speed shall ride.

* * * * *

In the suburbs' wide expansion,
Round the circling mountain spread,
Many a fair and stately mansion,
Be-embowered shall rear its head.

Many a garden, gay and smiling,
Bright with bloom of rarest dye,
There shall ope its walks, beguiling
Even the saddest heart and eye.

Many a leafy aisle, far-sweeping,
Shall extend its grateful shade ;
Many a fountain, ever leaping,
Gem with coolness all the glade.

Verdant vineyards, cornfields argent,
High shall clothe the mountain brown,
Spreading wide a painted margent
Round the city of Cape Town."

Even the new Houses of Parliament and the Art Gallery and theatres come in for their share of poetical justice ; and the allusion to the Exchange and English Cathedral is particularly well-timed just now. Hear the prophet :—

" All that art and taste can tender,
All that riches can avail,
Piles of architectural splendour
Shall adorn the central vale.

Domes of science, graceful rising,
Shall the homes of commerce greet,
Where trades currents terminating,
From a thousand shores shall meet.

In the midst a palace, fitting
For the halls of high debate,
Where a nation's fathers sitting,
Guide the councils of a state.

Solemn spires that point to Heaven
Shall the queenly city crown,
Nobler crown can ne'er be given
To our city of Cape Town."

From this point of his vaticination, the seer becomes sarcastic, when he prognosticates that in the dim futurity of two hundred years, it shall happen that then only we shall be really worth our salt.

" Then all rulers shall be royal,
As a nation's chiefs should be ;
Then all subjecs ever loyal,
As becomes the brave and free.

Then no lawyer truth shall smother ;
Authors then shall modest be ;
Priests shall all love one another ;
Doctors kill and ask no fee.

Then no fop in fashion's slavery
Shall offend the gazer s eye ;
Then no Miss in flaming bravery,
Win a smile from passer-by.

Pious, without airs' precision,
Learned, but from presumption free ;
(Such strange sights we see in visions)
Shall the youths and maidens be !"

Among the essays there are some remarks by the editor of this plucky little "South African Mirror" on the advent of Louis Napoleon to power, which read curiously enough, now that his son and Empress are making a bid for popularity in France. Commenting on his being elected to be President of the French people, Mr. Holland observes that "Louis Napoleon, *it is now allowed*, is really a man of some mark, apart from the circumstances of his descent,—one whose talents and popular qualities will of themselves account for much of the enthusiasm of the French people in his favour. At the same time it must be admitted that his *forte* has hitherto appeared to lie rather in words than in action; but of the former 'fine brave words,' displaying no mean power of thought and force of character, there has been enough to warrant both the hopes of his partisans and the apprehension of his opponents."

"Louis Napoleon, it will be seen, is now a man of forty, an age when judgment and experience may be supposed to have tempered the fervid youthful fancies pardonable enough in one whose career commenced under such remarkable circumstances." * * *

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"As to the probable sequel of a career which has been characterised by singular mutations of fortune, it would be hazardous to venture an opinion. Judging from the past, however, it would seem that Louis Napoleon, with much undeniable talent, and some of his uncle's power of awakening the attachment of others, is one of those unhappy individuals, who are, to use a common phrase, '*born to ill luck*;' to whom Chance is for ever presenting a show of glittering prospects, which vanish like the mirage as they advance; who are constantly seeing great opportunities elude their grasp, *and are perpetually rising only to be cast down with greater violence*. Whether with such men the fault in general is in their stars or in themselves, is a question about which there cannot be much difficulty in forming an opinion."

Now really it would have done the late Emperor a world of good, if a copy of this remarkably prescient opinion had been sent to the Tuileries, for its truthfulness of observation cannot be denied in 1874.

So far back as 1848 we find that the pens of Mr. Holland and Mr. Sam Sly were vigorously exercised in showing up the "*wants of the Cape*." How amusingly true is not the following scrap:—

"We want many things at the Cape besides money. We want a new Post Office, after some business-like model, where, immediately after the letters are sorted and a curtain is withdrawn, each applicant perceives, without rushing or bawling, whether his pigeon-hole (which is numbered) contains anything for him, and if not, walks away; whereas now it is like Bedlam broke loose, and the tugging and squeezing to get nearest to the two little queer side windows, resembles a rush to the pit at the Surrey on a favourite's benefit night. * * * * * * *

"But above all things we want a large hall,—if you please, above the present Commercial Exchange, and approachable by a flight of steps, if not too hot and windy; at any rate, some good and spacious room for our various meetings, music, and dancing, instead of being obliged to turn out of the Exchange, and be sent from pillar to post,—now to the little room near the library, and again to the Masonic room—bag and baggage, at every little exhibition and novelty that arises. It is singular that the first merchants in Africa should have borne this inconvenience so long. But now the time appears to be ripe for a change, and with a bold effort and a brisk subscription, both a new theatre and a new hall might be erected, with every probability of their returning a good interest."

Well done, Sam Sly! You have lived to see a good many things carried out at last, but you have had nearly a quarter of a century to pass through before Mr. Aitchison reformed the Post Office, and Mr. Hutchinson and the Directors of the Young Mens' Institute felt their way towards supplying these great and universally admitted wants. With the advent of Responsible Government, we seem at last to have woke up to a sense of our social deficiencies, and are still rubbing our eyes over the possibility of being actually useful to the present generation. When shall we have streets and pavements worthy of the town? Perhaps when another period of twenty-five years has passed over us! if then!

So, too, of the Cape Town University, which at last has been established in our midst, and whose members were specially addressed in solemn congregation by the Vice-Chancellor on the 12th December. So far back as 1848—we find from the pages of the *Cape Town Mirror*, that Dr. Dale gave utterance to the following sentiments, on his induction to the Chair of Classical Literature at the South African College, and which fully deserve now, as they did then, the mature consideration of all who have the intellectual advancement of the Cape Colony at heart. Speaking of the state of the college and the scholastic limits within which education was to be sought, he said that "the ulterior intention of this college is not so much to implant the elements of knowledge as to develope the more mature intellectual faculties—to prepare its members for the Church, the Bar, Physic, and the general professions; to send forth continually a body of intellectual and practical men in every department of life. Why, then, I ask, should it be deemed necessary for parents to send their sons to the universities of Europe? Here is a collegiate establishment essentially designed to meet the wants of students in the higher branches of knowledge; and I am sorry to speak it as my conviction, that it is owing solely to the apathy of the inhabitants respecting education that (provision having been made thereto by the founding of this college) they have not had long ago a university with able professors in all the departments of classical, juridical, and scientific knowledge. On this basis, and with this intent, the South African College is founded, and awaits only an increased influx of students,

and the more frank support of all classes, to develope more fully her resources both in the collegiate and scholastic departments."

For our own part, we have always maintained that until the ladies are induced to seek for the treasures of literature, and stimulated to clothe themselves in the garments of knowledge, it is idle to expect men to take any very active part in teaching their youngsters to respect learning here. Life is too short, and the climate of the Colony too enervating for mere book-worms. In the absence of long wintry nights, and lack of in-door entertainments, our population are driven to bask in the sun, and take their quantum of sensuous delights. How to live lazily on a very moderate income is alike the aim of high and low, white and black; and until the women of the Colony determine to put themselves on a par with their European sisters, the men of the Cape will not bother their heads about mere book-knowledge. One of the most promising features of our social life just now is the fact, that the Dutch Reformed Church has not been too proud to take a hint from the late Bishop Gray, and secure first-class lady teachers for its educational establishments all over the Colony. The increase of wealth, and its more general distribution of late, has largely contributed to the success of these schools; and if our young men don't mind what they are about, they will be soon overtaken by our sweet girl graduates, and forced to yield them the most abject homage. We see no reason why domestic servants should not also be trained to habits of exact thought, as well as to habits of personal neatness and manual deftness and skill. Too often their minds are a perfect blank; while their eyes and hearts are sensitive to much that would cease to be temptation were they rightly understood and made plain to their understanding. If Dr. Dale or Mrs. Jamison will turn his or her attention to the true interests and liberties of this neglected class of human beings, they will earn the best wishes and lasting gratitude of hundreds who have reason to curse the day when they were born to a life of toil, and trouble, and sordid wretchedness.

We are travelling, however, beyond the limits of the *Cape Town Mirror*, which was evidently established to amuse an idle hour. The editor, however, must have had hard work to fill his closely printed columns with English news or interesting matter, when it took two months by sailing vessel to receive despatches from home. There is, therefore, a surplusage of extracts from sound authors, placed in curious juxtaposition with scraps of local news. Of these, the most interesting to us now are the details of Sir Harry Smith's campaign against the insurgent Boers over the Orange River, and their rout and destruction at Boom Plaats. It is curious to trace through these papers the growth of national feeling and the desire of federation through long years of trial and doubt as to what would be best for our own interests so long as we were surrounded by hostile neighbours and restless tribes, and yet we seem as troubled as ever.

Whether we shall ever succeed in settling this knotty question is

a matter of opinion and time; but this much is clear, that so far back as 1848, the idea of federation has been freely ventilated in colonial papers, and ably debated in high places.

Now, a problem worthy of more attention than it has yet received, is to determine the peculiar element to which the singular strength and vitality of the federal principle is due. Much, no doubt, is due to *race* and language. In a common origin, and still more in a common language, there is a strong cohesive power; but still it has not been sufficient to promote Italian union and abolish local jealousies. Identity of origin, mutual protection, commercial intercourse, and economical government—all require that a number of weak states or provinces should combine to lower taxes, reduce armies, and promote a common welfare by federal union of legislature and fusion of laws. Will the day ever come when from Sea Point to the Zambesi, the same tariff and laws will be impartially enforced by Her Majesty's representatives?

To show how curiously history repeats itself, we extract the following remarks on the state of anarchy to which the city of Cape Town was reduced in September, 1848. The same thing might have happened at the last municipal election:—

"The Board of Commissioners has suddenly lapsed into a state of non-existence, it being discovered that out of the whole number of members elected in May last, there was not a sufficient number legally qualified even to form a quorum, while no means existed of ousting the 'dead men' from their seats until the month of May, 1850. The Board of Wardmasters is in no better condition. Of the ninety-six members who should have been elected on Monday last only eighteen were returned, being forty-six less than are required by the Ordinance to transact any business touching the town funds, of which they are made the special guardians. The whole municipal machine is therefore at this moment working without any kind of control, and a large weekly expenditure necessarily incurred without the possibility of either check or management, except on the part of the three or four servants of the municipality at the Town House, who have now devolved upon them the whole charge and direction of affairs." Had Mr. John Philip Stigant been at the head of affairs in those days, what a storm in a tea-cup would he not have made out of this luckless affair, and how energetic would he not have been in its repression.

The following account of the Botanical Gardens, as they appeared to Kolben nearly 175 years ago, has a peculiar interest at the present time, when they seem to be in a fair way for recovering their long-lost beauty and reputation. When Mr. McGibbon's new iron conservatory is put up, we shall indeed have something to be proud of:—

"I am apt to think the Company's Gardens at the Cape are the noblest and most beautiful curiosities in all Africa; and I question whether there is a garden in Europe so rich and beautiful in its production as any one of them. The planting of a garden

was one of the first things the Dutch did at the Cape; and they have enriched themselves in this article considerably. The Company's Gardens are said to be provided with almost everything the vegetable world produces by way of fruit and flower. Some of every curious sort of plant or flower, in almost every clime, have been transplanted into those gardens. The Governors, under whose sole direction the gardens are, have been ever very active to procure from other parts some of every sort of flower and plant they had not at the Cape. And the Cape climate cherishes every plant, every flower, and every herb that is brought thither. The gardens are not laid out and divided, perhaps, so curiously as are many in Europe; nor are there seen in them any considerable works of art by way of embellishment. Nature has little to set her off there beside her own charms and the hand of the gardener; and she is more charming than I have seen her in any other part of the world. Thousands of various flowers strike your eye at once vying with each other for superior beauty. Here and there you see fine groves of trees and beautiful summer-houses; and here and there you have fine shady walks. The gardens are very spacious, and from most part of them you have a delightful view of the country."

If old Kolben was to see the way in which the Colonial Engineer Department have allowed the avenue trees to be mutilated and ruined by ignorant trimmers, he would probably have a very different song to sing of the Governor's or Company's Gardens.

Among the "Varieties" offered to the readers of the *Cape Town Mirror*, we have the following singular quotation from Bechstein, the rhapsodist, as thus interpreting part of the song of a favourite nightingale. Hark to the note of Philomela!

"Zo-zo-zo-zo-zo-zo-zo zo-zo-zo-zo-zo-zir-hading.
Hezezezezezezezezezezezezeze, conas ho-dze-hoi,
Hig aig aig aig aig aig aig aig aig aig aig aig aig aig aig naiaga? coricor,dzio pi,"

of which we will only say that we hope it was more harmonious than it looks, and that we defy anyone to read it out aloud without laughing. In a different vein is this extract from Franklin about never desponding:—

"What if you failed in business? You still have life and health. Don't sit down and cry about mishaps, for that will never get you out of debt, nor buy your children frocks. Go to work at something, eat sparingly, dress moderately, drink nothing exciting, and above all keep a merry heart, and you will soon be up in the world again."

It was in something of this hopeful spirit that the celebrated Anti-Convict Association was got up and carried through to the bitter end. At all the meetings held to protest against the high-handed and unfair proceedings of Earl Grey to force convicts upon the Colony, the various speakers never bated one jot of hope, but steered right onward to their unalienable right to be treated as citizens of England; and the names of Rutherfoord, Ebden, Fair-

Cairn, Stein, Ross, Ansdell, Wicht, &c., are amongst the goodly array of independent colonists who dared to tackle the old lion—Sir Harry Smith—in his very den at Government House, and bring him to book. In looking back upon this stormy chapter in the history of the Cape, we have every reason to be satisfied with the characteristic vigour displayed by our leading public men in battling for our privileges, and the very high tone of the speeches delivered throughout, and reported in the *Cape Town Mirror*. Our space does not admit of any lengthy quotation; but the student of history will find ample proofs in the papers of that date of the resolution and sterling good sense which characterized the opposition offered to the schemes of the Colonial Secretary. Fortunately for the Cape, Earl Grey has been a rogue elephant in political circles ever since.

We cannot conclude this meagre review of the past without drawing attenton to the inimitable advertisements of that canny Scot, the late G. A. Mathison. They far surpass anything attempted by John Stonier or Marcus Hayman, and in turn are grave and gay, and humorous, and sublime in their matchless effrontery of statement. At the present season we should be grateful to any philanthropist who will fulfill the promises set forth in the following:—

"'TIS BLAZING HOT!

"Nevertheless the *high conditioned* are no longer necessitated to broil in exudation, nor the *meagre* to run the hazard of feeling the last drop of moisture depart from their attenuated trunks. As philanthropy has benevolently advanced, to interpose a refrigerating medium between the afflicted and bright scorching Sol—A delectable boon to the fast-dissolving, is the PHILANTHROPIC ALPACA COAT; cooling as the zephyr, and light as a gossamer web. Applications for the above, or the Real Omar Essence, are to be made to the Scotch Repository, No. 20, Longmarket-street."

Alas, poor Sandy! where be your jokes and quiddities now; seeing that the streets of Cape Town are free of smells, and your refreshing perfumes are no longer needful to stifle them?

The following advertisement will suit all times and hit all tastes. It is truly colonial:—

"Just now, wanted a wife
As a partner for life,
Who her husband will treat with affection.
Beauty's not cared for,
But what he's prepared for
You'll find in the following direction:—

With the charms of her mind
Her heart must be kind,
And her feelings of love must be deep to him,
In order that she
May willingly be
His companion through life, and may keep to him.

Her temper comes next,—
Not easily vext
At each trifle her plans that deranges ;
But let it be ever
Her constant endeavour
To avoid all fantastical changes.

As for fortune or birth,
These are thought little worth,
If to please be her constant endeavour.
The writer of this
Would expect to find bliss
In her love, and would love her for ever.

If there should be a maid
Who would not be afraid
His honour to trust, and would write to him,
Address—" Mr. Phun,
Solus-lane, No. 1,"
And 't will prove a great source of delight to him."

Apparently, it was with no small reluctance that the *Cape Town Mirror* was given up ; but the reasons given by the editor of this valuable little journal seem peculiarly forcible. " The frame of society in this Colony is not suited for cheap publications. The lower classes do not read. The middle and higher classes who do read are exigent in their requirements ; they desire only the best order of reading, and are able and willing to pay for it at a fair price. And this price, it is clear, must not merely be sufficient to reward the risk and labour of the proprietor and editor ; it must also allow of a fair remuneration to contributors, without whose aid it will be impossible to give the necessary variety, originality, and local stamp to the work. Time and talent are commodities too valuable to be frequently devoted to unremunerative exertions. Neither is it by any means pleasant for an editor to feel himself constantly under a debt which he cannot repay, and to be compelled to requite contributions of sterling value and interest by no better return than barren thanks or empty praise." This was written twenty-five years ago. There is still room for improvement, it seems.

"Oh! Breeze, Softly Blowing."

Oh! breeze softly blowing from out of the west,
With orange-bloom odours thy light wings embalming,
Oh! art thou just sprung from the unruffled breast
Of the bright summer ocean, like Venus the charming?

II.

How far hast thou sped over valley and hill
Since the bright hues of sunset were fading and dying;
And now in the starlight, slow wandering still,
Invisible spirit, oh! where art thou flying?

III.

Hast thou sat all the day in the sails of some bark,
Which over the billows is joyfully leaping,
And now stolen forth in the cool and the dark,
To kiss from the flower-lips the dew on them sleeping?

IV.

Why still, with a sigh, dost thou speed on thy way,
When th' coy flow'rs spread round thee their odours inviting;
When dews, softly falling, thy progress delay,
And fireflies, night's jewels, each dark nook are lighting?

V.

Oh! whither, then, breeze, would'st thou journey afar?
Why, sighing regretfully, travel on ever?
Far above in the skies is yon bright beaming star,
Thou art bound to this earth, and may reach to it never.

VI.

Like everything else of terrestrial birth,
Bound to earth, though so free in thy coming and going,
Then hasten to seize the soft pleasures of earth,
Nor dream of the skies that above thee are glowing.

The Old Records of Graaff-Reinet:

SOME EPISODES OF CAPE HISTORY.

CHAP. I.

THE Dutch East India Company founded the settlement of the town and castle of the Cape of Good Hope solely for objects connected with their Eastern maritime traffic, and systematically suppressed—as far as lay in their power—the extension of colonization into the interior. The only important instance of their departure from the fixed principle of admitting no free immigration—of permitting no European to settle except in some civil or military capacity in the service of the Company—was the admission of the French refugees, who, at the Revocation of the Edict of Nantes, found a home from persecution on our shores towards the close of the seventeenth century. For the rest the first colonists were, with slight exceptions, such, as having been landed originally in the service of the Company, were by special favour or on account of bad health, or some such reason, permitted to settle as free burghers. In what that freedom consisted will be manifest as we proceed. It will suffice at present to observe that the Dutch East India Company never lost its character of a semi-mercantile, semi-military despotism, which, undoubtedly, was a chief element in the restlessness which marked and promoted the extension of the European population into the interior.

It became evident to the authorities, in course of time, that a further step had become necessary—that their subjects having spread themselves over the country as far as the Rhenosterberg and Tarka, Swellendam would hardly do any longer as a frontier town; and steps were taken to establish Graaff-Reinet. From the old official records preserved in that town we gather a short history of some of the events connected with the settlement of that part of the country. We find that in 1786 Mr. Woeke, who is described as "Koopman Titulaire," or second-class merchant (in the service of the Company), was appointed Landdrost, and with the Secretary Wagenaar sent down to organize the Drostdy of Graaff-Reinet—the boundaries of which extended to the Nieuwveld towards the west, and the Fish River to the east. No doubt the necessity of taking possession of Algoa Bay for fear of its being colonized by a foreign power was a great incentive to the policy that dictated the extension of its jurisdiction by the Company. On the other hand, it is not to be wondered at that the stream of immigration should have been strongest in the direction where the colonists had to deal with the weak and scattered tribes of Bushmen rather than to the south-east, where they had to cope with the more warlike Kafirs. The first thing that claimed the attention of Landdrost and Heemraden (for that time-honoured Board was at once formed

on the model of the older divisions of the Colony) naturally was the establishment of the district town. It was found that for this purpose the farm of the burgher, Dirk Coetzé, would be required. He was accordingly summoned to appear and agree to the terms upon which it would be decided that he should give up his farm for the purpose of establishing the Drostdy or Residency. And here it will be necessary to explain what were the terms upon which the tenure of a leenings plaats (or loan place) was granted. A burgher, having selected a farm, was permitted to occupy it under certain provisions, the chief of which were: That there existed no previous claim upon it; that it was not required by Government; and that he paid a certain quit-rent annually. The payment of the quit-rent was in fact the title; but for the twelve months only. Any one ceasing to pay, or fallingi nto arrear with his quit-rent, *ipso facto* lost his claim; and on the other hand, if Government required the farm, the occupier was to give it up, upon his receiving notice to that effect. He might depend upon being permitted to occupy elsewhere on the same terms, but compensation, even for improvements, was a matter of favour. On this occasion the authorities dealt liberally with Mr. Coetzé. Upon his appearing and submitting his claim, it was resolved "to offer the said Dirk Coetzé 8,000 guilders, on consideration of his waiving his claim for compensation; and in respect of his application for the farm of Erasmus Smit and an unoccupied farm without quit-rent (in freehold) to himself and his children, it was resolved to accompany the same with a strong recommendation to His Excellency the Governor and the Honourable Council."

We shall now take a glance at the institutions of those days. First of all we have the Board of Landdrost and Heemraden. The latter were six in number, nominated by Government, and held honorary appointments. Two retired in rotation every year, and the vacancies were filled up by the Governor in Council out of a double number of names submitted to him by the Board. The Landdrost received no fixed salary, but was paid at the rate of Rds. 4 for every meeting at which he presided. Thus for twelve months at one meeting per month he got Rds. 48; but he was allowed Rds. 3 per month for firewood; and his travelling expenses on commissions and inspections were made good in like proportion. An empty district chest, on the other hand, frequently required the Landdrost to make advances in cash for payments and supplies, for slave labour and so forth, and no doubt in such and other ways there were, under a mercantile *regimé*, various chances for a man of requisite means to make a profit out of his official position. The Secretary, District Surgeon and Messenger (or Sheriff), received salaries in proportion. Then there were the Veldwachtmeesters and Lieutenants—burgher officers, whose situations, together with the Baas Padmakers, or overseers of roads, were honorary, but who had this privilege over the ordinary burghers, that each one, in his official capacity, had the right to command the burghers under him

for the public service instead of their being themselves liable to impressment in person or property. Every ordinary burgher was liable to be called upon to give his personal service or contribution to supplies for burgher duty, repairs of roads, forwarding the posts, transporting officials on duty, and all like requisitions, and in default to be summoned before and fined by the Board of Landdrost and Heemraden. No burgher might remove from one district to another without applying for his certificate of burghership from the authorities of the district he was leaving, and depositing it with those of the district he removed to, at the same time applying for permission to take up his residence there.

The taxes certainly were not heavy. Beyond the Opgaaf or percentage paid annually upon the live stock he owned, amounting to four shillings per hundred on sheep and goats, and three farthings for each head of cattle and horses, and the recognitie or annual quit-rent, which was Rds. 24 on a farm of the ordinary extent of about 3,000 morgen, or, as it was better defined, of half an hour's radius on horseback, there were no money taxes; but the districts being established upon a strictly self-supporting system, the levies made upon the inhabitants for the defence of the district, for the maintenance of roads, for the erection and repairs of buildings, were sometimes considerable. The scale of remuneration for all such services was very low, and the system of impressment opened a wide door for favouritism on the one hand and oppression on the other. With such a slender income as the quit-rents and opgaaf yielded, it was impossible to meet the current charges, much less the super-additions of the extraordinary services for public buildings, church and parsonage; but repeated representations to Headquarters elicited no pecuniary aid. The Landdrost was told to raise money by loan or subscription, but that the district had nothing to expect from the central government. Consequently we meet with a resolution wherein "the Landdrost having stated that the means of this district being still very slender, and the buildings already erected are sufficient for the temporary accommodation of the Landdrost and Secretary, and other functionaries," it was resolved "to suspend the buildings, and with a view to economy and the diminution of the public debt, to sell the timber and material; the Landdrost and Secretary having generously undertaken to have all the further accommodation they might require, for themselves and for their slaves, erected at their own expense."

It is no matter of wonder that one of the first complaints preferred to the Board of Landdrost and Heemraden was on the subject of the losses sustained from the depredations of the Bushmen, and that the Boers on the Fish River likewise had their grievances to represent in respect of Kafir depredations. These representations do not seem to have been made in demand of aid, but rather as pleas for remission of taxes or in justification of encroachment. Encroachment, unfortunately, is the synonyme for all European colonization,

and the extracts now given will prove that the Dutch Government and the local authorities were inclined to check it as much as possible, and to restrain their people, although no doubt quite recognizing that it was impossible to prevent encroachment altogether. The following are the reasons given by the Central Government for authorising the grant of erven in the town :—

"Upon your proposal to give out certain erven in the neighbourhood of the Drostdy,—considering that such a measure may serve as a collateral means of attaining the object of our Lords and Masters *in patriâ* to check and prevent the removal of the inhabitants to too great a distance from the metropolis, and whereas on such erven some useful trades and occupations might be carried on by many of the inhabitants to the convenience and service of others, and as a means of earning their own livelihood,—we authorise you to make grants of land to such as may apply, &c." The representatives of the Honourable Company were right enough as to the latter of the conclusions they came to, but as regards the prevention of colonization by such means, the experience of two generations since their time has only proved that every new settlement is but a fresh starting-point for further extension—for further encroachment. To a petition made by certain inhabitants located on the Fish River, who requested to be "permitted to take out the water of the river on the opposite [the Kafir] side as well as on this [the colonial] side, as there were greater facilities on the other side, and as it fell heavy upon those who have no agricultural farm to buy their bread,"—the petitioners were informed that "they would be strictly required to conform to the terms of the statute of the Governor and Council of the 19th July, 1786," which prescribed the Fish River as the boundary of the Colony.

On another occasion when on account of a severe drought certain burghers on the Fish River applied for leave to take their cattle across the Fish River into Kafirland for the winter, it was unanimously resolved that "whereas the said application is opposed to the placaat of 1786, and another portion of the inhabitants had already complained of annoyances from the Kafirs, the said document be returned to the petitioners, and altogether disallowed."

These quotations show how reluctant the local authorities were to permit any encroachments upon the natives. Whether or not this arose from policy or humanity in the rulers, it may be reasonably assumed that the Boers, who, in their struggles with the natives were always left to their own resources, were actuated chiefly by their immediate necessity; such, namely, as arose from the increase of their families or their flocks, the periodical droughts, or the retributive incursions of the natives. These, in many cases, caused much loss of property and danger to the lives of the isolated Boer families, as stated in this extract from a petition to the Governor in Council: "As to the dangerous state of the Colony, although we could mention a thousand instances, we shall confine ourselves merely to

what has occurred in the Sneeuwbergen in this last past month of March. Can there be a more dangerous condition of things than that not merely all our possessions are daily exposed to plunder, but that we are not even safe with our families in our houses in the open day. The wife of Willem Jacobus van de Merwe has been cruelly murdered within ninety yards of her house, and the husband dangerously wounded [the house having been attacked by bushmen]. As also that on the farm of Pieter Swanepoel. He had six of his people murdered, and one of his houses sacked in broad daylight. Pieter Oberholzer had one of his people murdered, and a horse and some sheep stolen; and Gerrit Jacobus Koekemoer had his homestead entirely destroyed, twenty-two horses killed or carried off, and two of his people wounded." Such was the condition of our frontier population in those days, more particularly in reference to the native races in the midst of which they had become located. Undoubtedly they had many hardships to endure; and it may be equally certainly concluded that on their part there were instances of aggression which we may have no desire to palliate, but for which, in their circumstances, there is some excuse. The healing hand of time has cast its veil alike over their sufferings and their misdeeds.

The first officials of the district had great difficulties to contend against in, on the one hand, imposing the laws and maxims of a settled Government upon a people long accustomed to unrestrained freedom, and whose restlessness was proverbial; and on the other, in carrying on the Government without a revenue, and having to hold the protecting hand alike on white and black, without any other force at their disposal than the burgher organization.

In November, 1790, the Board of Landdrost and Heemraden had under discussion an order of the Governor in Council, requiring a tax called "passage money" to be levied upon produce entering the town. The proceeds of this tax, it appears, was intended to go to the general revenue. The Landdrost and Heemraden considered that the district, being self-supporting, and having its own defences to provide for against the native tribes—if a tax for the defences of the Colony was reasonable in the Cape and Stellenbosch districts, where the inhabitants enjoyed the protection of the military, it was only fair that the burghers in this district, who had to protect themselves, should be exempt. Willing, however, to show the utmost deference to an order from headquarters, an adjourned meeting was fixed, to which the Ex Heemraden were invited. At this meeting a circumstance occurred, strongly illustrative of the redtapism of the official mind at that day.

The Ex Heemraad, Van Jaarsveld, submitted a petition from certain inhabitants on the subject of this proposed tax, in which some strong reasons were given for begging the Board to oppose it. In our day a Council in the position of this venerable conclave would have been too glad to be fortified by such an out-spoken document in support of their own dissent against an obnoxious proposal. Not

so, however, Mr. Landdrost Woeke. The petition having been read, "the Landdrost expressed his surprise that this petition contained a request regarding a matter which they had under consideration, and ought not, therefore, to be known out of doors. But as it appeared to him that the subscribers had committed themselves to this impertinent petition, not spontaneously, but at the instigation of others, he (the Landdrost) would make it his business to find out where the subscribers got their information, and who had had the temerity to divulge the secrets of this Council." This petition, so ungraciously received, was, six months later, followed by another, which was also submitted by the Ex Heemraad, Van Jaarsveld, but was addressed to the Commander in Chief administering the Government and his Council. After enlarging on the usual topics of grievance—their defenceless condition, the insecurity of their tenure of the loan places, &c., they say,—"That security and peace are noble privileges where the inhabitants of a country may enjoy the same in peaceful obedience to and under the protection of the authorities. Your Excellency and your Honourable Council will, in your great wisdom, please consider whether it is not right, in such cases, to notice the repeated and pressing grievances of the people who, in seeking relief, only follow out a natural law which in all ages they have been held entitled to assert. We may conceive the possibility of a people seeking relief from pressing and well-grounded grievances, or the abrogation of them, under circumstances where such relief or abrogation is not possible. In that case a people ought to be advised; and its ignorance in that respect cannot in the least diminish the respect which its representatives ought to have for its rights and claims. We can conceive that a people may prefer its claims in respect of a matter which is honestly presumed to be desirable and highly necessary, but which is not so in fact. In that case they ought to be advised, and it will be their bounden duty to be more careful for the future. In case an ill-advised or obstinate mob should dare to force upon the authorities clearly questionable demands, we conceive it to be the duty of anyone, by his oath of allegiance, to give all due support to Government in the right use of all those means which the laws place at its disposal. We conceive, on the contrary, that all ungrounded refusals, to comply with the petitions of the people, or to yield to their lawful and pressing demands, or at least to meet the same with due acknowledgment, give them the right respectfully to renew their solicitations, and to press for satisfaction."

These quotations show that there was already a pretty deep undercurrent of dissatisfaction, which not very long after culminated in open sedition.

In August, 1792, Mr. Woeke was recalled, and the military captain, Van Balen, was sent down as acting Landdrost, and shortly after Mr. Woeke's arrival in Cape Town, Mr. Maynier, who since early in 1789 had acted as secretary of the district, was also

summoned to Cape Town, as it appeared, to answer certain charges made against him by the Landdrost. The charges against Woeke, and those preferred against Maynier by him, resulted in the return to Graaff-Reinet of Mr. Maynier as Landdrost. Captain van Balen was at the same time ordered back to his military command on account of the European war which had broken out; it having thus become necessary for the colonial authorities to place the forts in a state of defence against any possible descent of the French.

Mr. Mayniers' appointment (in May, 1793,) at its very commencement gave great umbrage, and occasioned quite a scene in the Board meeting. The dissatisfaction seems to have been displayed not so much on the part of the Heemraden as on that of the burgher officers. Mr. Adriaan van Jaarsveld was again the leader. The Landdrost, according to the minutes of the proceedings, withstood the tempest with admirable temper, reminding them "that they all were answerable to one and the same authority, and that if they had any complaints to make they knew to whom to appeal; that if their complaints were well-founded he would himself use every endeavour to get them redressed." Whereupon Van Jaarsveld replied "that he had no personal complaint against the Landdrost, and implied nothing to his prejudice;" and the matter dropped after mutual retractations, with a unanimous vote of congratulation to the newly-appointed Landdrost on his elevation.

Disturbances on the Fish River, the Kafir border, were already a source of trouble. As far back as 1789 we find Mr. Landdrost Woeke, accompanied by the secretary Wagenaar, in person leading a commando summoned to restore quiet. The river in the meantime had become flooded, and Mr. Woeke returned home, leaving Mr. Wagenaar to settle affairs. A long report by the latter only contains a confession that he had effected nothing. The borderers, left to their own resources, in their turn became the agressors, headed by one Lindique; and the authorities, while strongly censuring these proceedings, were powerless to prevent the mischief they deplored.

In June, 1793, a report from the Fish River again reached of Kafir depredations and consequent hostilities. The Landdrost immediately ordered a suspension of further attacks upon the Kafirs; and having dispatched a commission to the spot, was enabled on the 12th of August to report to the Board of Heemraden that "they had been successful in getting the chief Slamble to agree that the Kafirs would for the future remain within their boundaries, and leave the colonists unmolested." At the same time a requisition from headquarters ordered a levy of all available bastard Hottentots for the defence of the Colony against the French. The local authorities found it necessary to reply "that the thing was out of the question on account of the state of the country, both because of the frequent irruptions of the Kafirs, and that the inhabitants *were not to be relied on.*" The expression is a significant one. It may have meant that

the burghers were not able, single-handed, to cope with the Kafirs and Bushmen without the aid of these Bastards; but it may also imply that there existed such a state of disaffection as rendered it unsafe for Government to remove those people; for in due course we meet a severe despatch of the Governor in Council in consequence of the frequent complaints of the Landdrost of dissentions amongst, and impracticability of, the Heemraden; and the refusal of certain burghers to take the oath of allegiance having also been reported, the local authorities were ordered to prosecute them, unless they showed signs of amendment. But the spread of disaffection, so far from subsiding only grew on, and matters culminated in February, 1795, when, on the 4th of that month, the Landdrost was waited on by the two burgher officers, Van Jaarsveld and Tregard, who stated that the burghers were assembled in great force at the second drift (the Sunday River), and demanded an interview to submit their grievances *en masse*. The members of the Heem- and Krygsraden were accordingly summoned to meet on the second day after (the 6th), when the burghers having drawn themselves up on the common in front of the Drostdy, the authorities went out to give them a hearing. Their chief demand seems to have been that the Landdrost should with the least possible delay quit the district. The Landdrost affected to look upon dissentions amongst the members of the Board as the cause of the dissatisfaction, and offered to compose those differences; but it became more and more evident that personal hostility against himself was the chief motive. He at length gave the people to understand that if they believed his departure would promote their welfare, he was ready to leave; but he warned them that there were many important matters which would suffer serious delay from his departure; to which one Durant replied, "That does not matter; we do not wish to submit to you any longer. We and our wives and children have long enough suffered under your yoke."

It was in vain for the members of the board to seek to make any impression on the rebels. They were in their turn charged with connivance and dereliction of duty. To this the field-captain Andries Burger replied that "the burgher officers had resigned the military command to the Landdrost because the notice they got was too short, and that they were compelled to decline taking command because they could not get ready in two days." This referred to a certain meeting, at which the Landdrost had offered the command of an expedition to each one of the captains in succession, and every one refusing, he had assumed the command himself, requesting the aid of two of the Heemraden. To this reply of Mr. Burger some of them rejoined, "We stick to this document. We require the secretary to take a copy of it, and to return it to us. We also want the Hottentots. You must deliver them up in three days, or we shall get them out ourselves."

This last expression referred to a location of Hottentot refugees

who had left their kraals in the district, and whom the Landdrost had taken under the protection of Government. It was probably in this direction as much as in any other that Mr. Maynier, who bears the reputation of having been a statesman and a philanthropist, gave umbrage to the people over whose interests he was appointed to preside. Be this as it may, another week saw him on his way to Cape Town, and the Board of Heemraden assembling under the presidency of one of their number, and recommending to the High Commissioner the filling up of the vacancies in the commands of the burgher force "so arbitarily left in abeyance by the Landdrost." It was further resolved "to report to the High Commissioner the unwillingness of the burghers generally to turn out for commando service, and to recommend as an inducement that those who shall, upon their return from commando, produce to the Landdrost or secretary a certificate from the commanding officer that they have taken any Bushmen prisoners of war, shall be entitled to retain them in their service, and upon payment of Rds. 10, or so much as the Governor shall deem proper, to the revenue of the Honourable Company, they shall receive a title deed such as was usually granted for the possession of slaves." The Board considered that "such a regulation would revive the dormant valour of the burghers, and that the enemy would by these means be all the more readily overcome."

Upon the above seditious proceedings being reported by the Landdrost, and on his arrival in Cape Town, Mr. Oloff de Wet was sent down as Commissioner for the settlement of affairs, with Mr. J. A. Truter (afterwards Sir John Truter) as secretary to the Commission. They brought with them Mr. Lambertus van der Poel to be the new Landdrost, and Mr. Henry Roselt as secretary of the district. The Commission, after a stay of three months, returned to Cape Town, having so far succeeded in the object of their mission as to leave Mr. van der Poel and Mr. Roselt installed in their respective offices; but they were hardly gone before further steps were taken by the inhabitants to assert their independence. Five members were added to the Board of Landdrost and Heemraden—called the representatives of the people,—who, taking their seats at a separate table, had votes in the proceedings of the Board. The Landdrost and secretary were asked whether they would consent to act as holding their commissions from the burghers. They both consented, but applied for leave of absence to proceed to Cape Town. This was agreed to. The minister, the Rev. J. H. van Manger, who was the first regularly appointed minister, and entered upon his office in 1792, was also cited to appear, and the same thing being demanded of him, he replied that he had pledged his allegiance to the Honourable Company, but did not consider that that precluded him from continuing his ministry under the burgher government. He had no objection, and the dominie, or church clerk, gave the same reply. The Landdrost and secretary being

both *absent on leave*, the Bode Oertel was appointed to act as secretary, and to be in charge of the public departments during their absence; but here came a difficulty,—the Bode had himself meditated a trip to Cape Town for the purpose of getting married. Upon his applying for leave the Board resolved "that his request should lie over until further orders." Mr. Oertel, however, was not long left to grieve over his hard case, for at the very next meeting a matrimonial commission was appointed, and the minister having consented to call the banns and perform the ceremony in all cases passed by the matrimonial court, the acting secretary had the satisfaction of being the first to take advantage of the new regulation. Prior to this, all persons wishing to be married had to proceed to Cape Town for the purpose of passing the matrimonial court. The legally appointed authorities having again quitted their posts, the Board of Heemraden remained in the performance of their functions, with this difference—that their meetings were attended by two of the tribunes of the people; and it denotes no slight feeling of Conservative subordination that when certain members proposed the drawing up of regulations for the guidance of the Board in reference to the presence of the people's representatives as additional members, the majority were of opinion that as there existed no superior authority to sanction such rules, inasmuch as the district had, as yet, not acknowledged the English Government, which had through General Craig in the meanwhile taken over the Government from the authorities of the Dutch East India Company, no rules they could make would be binding.

The Heemraden, after the departure of Mr. Van der Poel, appointed one of their number, Mr. Gerotz, as acting Landdrost, and carried on the Government of the district as well as they could. The combined meetings at which the officers of the burgher force attended were, however, the most boisterous. Van Jaarsveld lost no opportunity of proposing a commando or some measure of coercion of the natives. One instance is recorded where his demands being exhorbitant, two of the members, Gerotz and Tregard (a burgher officer), unbuckled their side arms, and laying them on the table, threatened to resign if his proposal were carried.

A Trip Through Kafirland.

CONTINUED.

Bidding farewell to our kind hostess and host we left "All Saints'" at noon, and began ascending until we reached the elevated undulating plateau, which commences a few miles from the station, and runs to the foot of the "Quathamba" or Drakensberg mountains. The ascent was most tedious, and the qualities of our mules and oxen were put to their utmost test.

As we left the lower country the vegetation became less luxuriant, and the sweet-scented mimosa bush became more scarce, until at last it altogether disappeared, and gave place to the "sugar tree" (protra), a small shrub-like tree, devoid of much foliage, and useful only as fuel.

On reaching the summit of the plateau we experienced a complete change of temperature; from being close and hot the air became cold and damp, and a mist overspread the country, which shut out the view on all sides. The atmosphere became laden with particles of moisture, and our clothes and saddlery were soon saturated.

Towards evening the wind got up, and altogether our situation was gradually assuming a most unpleasant phase, and, as far as we could see, was going from bad to worse. A—— shot some partridges on a slope off the road, and the idea of a change in diet, together with the adverse weather, induced us to pitch our camp earlier than usual.

We selected the best site we could under the circumstances, and our emcampment soon sprang into existence. The pot was placed over a blazing fire, and we forgot our troubles under the inspiriting influence of "a wee drap." It is wonderful how a little stimulant administered to the inner man soothes and allays the turbulant feelings generated by petty misfortunes. Even W——, who at first was by way of being opposed to spirituous liquor in any form, gradually edged near, and finally succumbed to the seductive fumes of the "camp bottle," and ere long was accepted as a thorough convert to the theory of "the efficacy of mild stimulants when administered for the body's good, subject to the dictates of conscience." We do not for a moment mean to say that it was a parallel case to the man who was introduced at a great Abstinence Meeting at Exeter Hall as "The Awful Example," far from it, for in this case we saw a marked improvement in our comrade's health and spirits.

As the shades of night became more dense, the gathering clouds added fresh moisture to the already drenching mist, and the hitherto undefined dampness assumed the shape and form of an honest "down pour," the cold also increased in intensity, and we sought warmth and consolation in the mess tent. Our evening meal was served under somewhat trying circumstances; but our zest for the same was by no means impaired through the agency of the adverse elements.

Seated round the table on every conceivable apology for chairs, boxes, portmanteaus, biscuit tins, &c., doing duty, the rich (!) viands disappeared with incredible alacrity. Our digestions were assisted by a cup of the deep-coloured "Cango," or a beecker of foaming "Bass," of which we had but a limited quantity, and we finished with coffee, pipes, and cigars, finally winding up with a hearty laugh at our chief's expense. On entering the tent he had put his large white pericranial covering, yeclept "bell-topper," in, as he thought, a safe corner, and on rising, he placed it, with becoming solemnity, upon his head—when lo! and behold! a deluge of water ran down his face and shoulders, and gently meandered in a stream through the folds of his mackintosh. He then discovered, but too late, that the favourite "beaver" had been a receptacle for the drippings from a small hole in the tent, and that during dinner time it had become nearly half full. The night was intensely cold, and the heavy rain found ready ingress to the tents we brought with us, for they were dry and had lain unused for some years prior to our journey. We were now some good three thousand feet above the sea level, and every varying wind swept over our encampment with unhindered force. After leaving "All Saints'" we had crossed two mountain streams, the "Eugabo" and "Egotzini," which took the southerly course from the watershed of the "Gobo" ridge, a spur of the "Kalonyanga," or "Carlenyonga" range, as it is sometimes called, and fell into the Umquali, a tributary, as we have before said, of the Umbashee. The rivers after these poured themselves into the Xuka, another feeder to the "Dark River," and many and varied were the rivulets we had to cross ere we arrived at the sources of the larger up-country rivers. The hill upon which we were encamped was called the "Umfazikazi," from some Kafir tradition, which we partly heard repeated but was hardly of sufficient interest to relate here.

The morning of the 18th dawned with no prospect of the wind or rain abating, and our time was principally spent in bed, reading. Our meals were handed through the entrance, and we varied our somewhat monotonous occupations by now and then taking a short tour round the encampment, by way of exercise. A deep voice from the mule-wagon—tenanted by our chief—would every now and again exclaim, "How's the barometer?" only to be answered from our tents by "Still falling, ever falling!" Visits were paid to each canvas house, and one in particular appertaining to J—— became the object of especial interest, for we found that whenever a bottle was sent there—of course, medicinally—it never returned, and fears were entertained as to the consequences. Certain hilarious sounds, which emanated from their direction, also went far to confirm our suspicions; but these were doomed never to be occularly demonstrated as correct, for somehow or other we could not catch the delinquents "in the very act," and when questioned, their answer was conveyed in such a stern manner, that we rather wished we had not spoken: the acting was good, for on turning our backs a smothered laugh could

be distinctly heard from the suspected quarter. The following day presented no difference in either weather or occupations, with the exception, perhaps, of a little harder downpour, and the discovery on the part of A—— of a charming little river that had managed to insinuate itself into our tent, and gracefully wended its way beneath his camp bed—or rather matress. A certain feeling in the small of his back led our comrade to suppose that something was not quite right in that locality, and on turning up the waterproof he found a limpid stream babbling joyfully on its way. J——'s Zulu and a spade were speedily at work, and following the example of the founder of the Persian Empire and conqueror of Babylon, he diverted our mountain Euphrates by means of a scientifically-constructed canal.

As the morning of the 20th broke, we could see from the bright light which streamed through our tents, that a change had come over the character of the weather, and on emerging we found the hill and surrounding country still shrouded in a misty cloud, but through which the sun was endeavouring to penetrate its welcome rays. On consulting our barometer we were enabled to reply to our chief's reiterated query regarding its actions that "It was steadily on the rise."

The camp was soon in a bustle, and ere breakfast had been discussed the genial face of old Sol presented itself to our admiring gaze, at first timidly surrounded by an indistinct halo of "atomic globules," as though apologising for his long absence, and then more boldly, until at last he developed himself fully, and burst forth in all his brilliant glory. Tents were struck and laid on some rocks to dry; and all our kit and belongings underwent a thorough overhauling. Quite a vapour-cloud was produced by this drying process; and it took several hours to eradicate passably the effects of our three days' shower bath.

As the mists from the valley rolled away we stood spell-bound for some little time at the magnificent sight presented to our gaze. A broad valley lay beneath us, travaserd by several streams which, owing to the late heavy rains, had become greatly swollen, and their combined waters flowed, or rather rushed, onward until they met at one point, and then resolved themselves into the "Kowe" or "Slang" River. These streams took their rise in the "Great "Gathlamba" or "Drakensberg," some fifteen or twenty miles from where we were standing. This mighty range of mountains rose perpendicularly from the further extremity of the Umfazikazi Valley, and after skirting this lowland for some considerable way took an abrupt turning northward, stretching far away in the dim distance. We were informed that we could discern Natal, and that the farthest peaks were those which bounded that Colony on the westward beyond the Umzimkulu River. It was certainly a grand and glorious sight, and one which would be difficult to equal in the southern part of this continent. It seemed as though a gigantic convulsion of nature had taken place in some remote antediluvian

age, and that these huge masses of sandstone rock were hurled indiscriminately one upon the other. They assumed the most fantastic shapes and forms, and it required but a small stretch of imagination to see depicted before us castles with their crenellated battlements, their keeps and posterns,—even men and animals seemed to be fashioned to our fancy. Spires and pinacles of all heights and sizes rose like minarets from beside the domed mosques below, and the architecture of the Christain and the infidel appeared to be each represented upon these rugged heights. The very name "Gathlamba," or "Guathlamba" as it is sometimes spelt, is descriptive of their general appearance,—it means "heaped up in a jagged manner;" and certainly nothing could look more wild and weird than did this extraordinary range.

After drying our paraphanalia we inspanned and were soon under weigh, and it was with a sense of great relief that we again bestrode our trusty steeds. The veldt was naturally very heavy, and our wagon progressed but slowly, frequent "diggings out" being necessary, but we ultimately reached the "Slang River," some twelve miles from first "Rain Camp." The drift we found to be impassable, and were obliged to skirt the river towards the east for a couple of miles, where we were informed by some squatters that the river became divided, and that, as a rule, the two lower drifts were practicable when the higher one was not so. On reaching the spot indicated we discovered that even there we could not effect a crossing; so we again outspanned and pitched our camp.

On the morrow we passed the "Rubicon" in safety, and made a good day's trek of some twenty miles. In attempting the passage of the Coffee River, a tributary of the Xuka, our wagon stuck fast in the middle; and though we pushed and hauled and yaked and lashed it was of no avail, so we outspanned the wretched oxen, and sought consolation in a good breakfast. As we were discussing this meal a small wagon with a Bastard boy as driver passed us. Fastened on the top like a bale of wool was a human mass which on inquiry proved to be the father of the boy—one Heyns by name—who years ago had taken a leading part in the affairs of the coloured people of this Colony, and was at one time nearly being returned as a member for Fort Beaufort. Our natural question was what had brought him to this plight. We had only to inspect the wretched man more closely, and we were sufficiently answered. He was insensibly drunk! It was indeed deplorable to look upon this picture of human degredation. A man who had at one time held such a position in the estimation of all those who knew him, and who had already made his mark in the country, to be lashed to a wagon and driven by his own son! What a fearful sight! and what a train of sad thought did it not give rise to! That cursed demon "Drink" had indeed got fast hold of this poor fellow, and his grim clutches clasped the victim in a deadly embrace. What a life wasted! What years of hard and honest work lost! All lost for that one

insatiable passion! Early next morning we learnt that poor Heyns had never reached his destination, for when the son unlashed his father he found that he was a corpse, and had but to remove him from the wagon to his last resting place. It was thus unprepared and awfully unconscious that he was ushered into eternity.

Breakfast down we set to work with a will, and found it necessary to use spade and shovel to make the opposite bank at all passable for our heavy load. In the space of an hour we had made a tolerable incline, and, inspanning the bullocks, we plied vigourously both whip and with our shoulders to the wheels. Our united efforts eventually proved successful, and we saw with pleasure our heavy vehicle gradually drawn up the steep and slippery banks. The oxen worked well indeed, and we have often thought what a debt of gratitude is due to these mute, patient beasts by those who profit by their exertions. We treked on for some considerable distance without any incident worthy of note occurring, until rounding the base of a large hill we came in view of the celebrated Gâtberg Mountain, so called from its peculiar formation. Almost at the summit there appears an opening which pierces the head and gives it the appearance of an artificial bridge. This mountain is a land-mark for many miles round, and is the western beacon or boundary point between Tambookieland and the Gâtberg District or Bastard Location. The Xuka River takes its rise near the base, and in fact when on its summit one could discern the sources of most of the tributaries of the Bashee. The drift we now came to was the highest one on the Xuka,—that is to say, the one nearest its source; and a most difficult and dangerous one for a large span to attempt. The road at the approach winds about in a most erratic manner, and just at the commencement of the descent to the river it takes a sharp turn to the right, making it a difficult matter to steer sixteen bullocks with a heavy buck wagon behind them; however, with great care this was effected without a hitch, though we had to go through somewhat the same process of levelling as at the Coffee River drift. A trader's house is situated a few hundred yards from the river, and there appears to be a sort of toll levied upon those who are unfortunate enough to be unable to resist it. As it was, a Kafir appeared upon the scene to demand, in the name of John Bull, the aforesaid trader, the required impost. When asked for what reason, and by what right, the reply was, "For keeping the drift in good order." This was so ridiculous, considering the work we had already undertaken, that A—— inquired anxiously for a good stout sjambok. At the mention of this instrument our dusky would-be tax-gatherer took to his heels, casting most suspicious and anxious looks behind him as he fled. We need hardly say that we were not again burdened with his presence. So much for the Xuka extortioners!

Just beyond John Bull's we crossed the boundary line, and entered Nomansland. The character of the country did no

materially alter, but it appeared at first less inhabited, and but few flocks and herds were met with. With the exception of some pauws we came across no game of any description, although the country seemed a most likely one. J—— secured one of these large birds by a very good long shot; and returning in triumph to our party, from whom we had detached ourselves for a short space, we gladdened the heart of our cook with the thoughts of being able to "dish up" something different to the usual bill of fare.

Some few miles further on we selected our camp upon the summit of a ridge; and as this was Saturday, we made ourselves snug for the following day, as during our trek we recognized the seventh day as essentially one of rest for both man and beast. This Sabbath was an exceedingly beautiful one, and everything seemed to partake of the quiet repose that so characterizes the Lord's Day. How refreshing is this rest from the weariness of a week's work, and from the thoughts that the cares of the world are apt to generate. We could not help calling to mind a verse taught us in our infancy:—

"O day of rest and gladness,
O day of joy and light,
O balm of care and sadness,
Most beautiful, most bright,—
Thou art a cooling fountain
In life's dry dreary sand;
From thee, like Pisgah's mountain,
We view our promised land."

As we strolled round the camp the call of the partridges seemed to emanate from every clump and bush, and we anticipated a treat on the morrow in the way of sport. But, alas! our hopes were doomed, for when we had struck our tents and inspanned we divided, armed with the necessary implements of destruction; but each party, though beating the bush and veldt with anxious ardour, failed even to get a sight of the coveted game. Two oribes we descried at a long distance; but these wary animals knew better than to remain too long in one place, and on topping the rise of the hill on which they were last seen, not a vestige of our fleet four-footed friends could be discerned. From the high ground over which we had been travelling we began to descend, and gradually we found ourselves on a level with the numerous small streams that dissect this portion of the country. After crossing several we came to the most important of the lesser ones, viz., the "Gâtberg River." It takes its rise at the foot of the mountain of the same name, and takes a circuitous course through this part of Nomansland, eventually emptying itself into the Tseitsa.

As we approached the drift we descried some eight or ten horsemen advancing from the other side. They arrived at the river, and after a short consultation one and all plunged in and swam their

horses across. As they entered they discharged their firearms in token of respect and as a salute. As they emerged some of our party recognized them as being the leaders or headmen in the Bastard Location; the two principals—Deploy and Adam Paul. They greeted Mr. Brownlee with great cordiality, and were evidently delighted at the prospect of welcoming him and his party to their country. We outspanned and breakfasted with the new comers, canvassing the possibility of our being able to effect a crossing; for on inspection we found the river some eight or ten feet deep at the drift, and running very strongly. Several methods were discussed, but none were sufficiently feasible. At last a happy thought struck A——, and that was, "Why not take off the buck and make a bridge." The length was measured, and we found that the idea was practicable; so setting to work with a will we dismounted the buck, and by the aid of our newly acquired friends we soon ran the heavy frame-work across the river. The transport of our baggage did not occupy very long; and on refitting the buck the oxen were inspanned and swam across bodily, with the wagon behind them; and thus we crossed the Gàtberg River.

We now pushed on as rapidly as possible, and passing by the farm of Adam Paul (where we partook of some milk and new cakes), we crossed the "Juxu," the head waters of the Tseitsa, and after a good morning's trek, outspanned for a short time near to a very pretty wild piece of scenery. It was formed by one of the small mountain streams forming a dripping well. It seemed as though the water had dived into the earth, and had suddenly appeared at the top of a small krantz; from whence it dripped over a moss-grown cavern. A great variety of ferns and small arums sprouted out from every niche and crevice and formed naturally what of yore we used to admire so much in the rockeries of the Bois de Boulogne.

Whilst resting near this pretty spot we were suddenly surprised by the appearance of Mr. Orpen and a small retinue, who had travelled some thirty miles to meet the Commissioner. We were greatly struck with our first impression of Mr. Orpen, and our after knowledge of his ability and social qualities fully bore out the old saying that "First thoughts are always the best." He is at present in a post of great importance, and one which requires more than an ordinary amount of foresight and circumspection; and the manner in which he has successfully steered through the different tribal difficulties shows at once that he has a keen appreciation of native character, as well as how best to further the interests of a government who has placed him in this important post. There is just one thing that we would mention here, by way of parenthesis, and that is, that the emoluments appertaining to these important appointments are, in our estimation, singularly inadequate for the men who fill them. When we come to see men of known ability filling such berths, and giving up all ties, both domestic and social, it occurs at once, "are their services sufficiently recognized in a substantial

manner?" The answer is only too obvious, and it would be well if a government who has already obtained a name for justice and *even liberality* (and that is indeed an almost unknown quality amongst governments generally), would inquire a little further into these matters. To what an extent does not the peace of our Colony depend upon the ability of the residents upon its far borders? and when every thing is given up—family ties, the children's education, and indeed every social necessary—is there nothing to compensate these men for such disadvantages? We are afraid, under the present *regimè* of pay, that there is little indeed; however, this is a question which we fancy only requires a small amount of ventillation to rectify.

In Memoriam.

[By quite an accident the following verses came into our possession. They are printed in a simply bound copy of Shakespeare, which was sold by mistake a few weeks ago as part of Mr. William Porter's Library. They were penned more than forty years ago by Mr. Hugh Lynar, and manifestly at the time when Mr. Porter left Dublin for London. Of the light which they cast on the sacred friendship between William Porter and Hugh Lynar, it is unnecessary to say a word. Of course, the volume from which we print these lines, and which was purchased by the Hon. John Miller, will be sacredly forwarded to Mr. Porter in Belfast.]

TO WILLIAM PORTER.

FROM ONE TO WHOM HIS FRIENDSHIP HAS BEEN THE SOLE REDEEMING GOOD IN LIFE'S COLD CUP OF MANY ILLS.

Ere yet, my Friend, the sad farewell is past,
Dashing life's brightest hour to me with woe;
Ere the last look is given, and the wish
In broken utterance meets the parting ear:
Ere life's sweet "honey-dew" is fled, no more
To render being worth its tiring cares;
Ere the bright spell is broken, which hath cheer'd
An ill-starred spirit, in its loneliness,
With fair and friendly forms—no idle dreams——
Receive this humble tribute. Though its gems
Gleam not on costly vellum, nor repose
Enshrined in rich Morocco's splendid guise,
'Tis still thy fav'rite Poet,—and his garb,
Howe'er so humble, matters not to thee;—
For sure I am that thou wilt not inquire
The worth of aught which Friendship's hand presents.

In the gay throng of earth's most busy scene
Thou soon wilt find thy place ; and it may rub
From kind affections all their early bloom
Drowning remembrance of those humble fires
That play'd around thy pathway, in the day
Of thy young hopes and triumphs, with the beams
Of sun-bright wit and genius, shed for thee :
And THIS, perchance, from thee may yet demand,
In the quick flight of thought, a moment's pause
To recollection given, and to hearts
Whose warmest breathings but aspire for thee.
But if (though it may scarce be thought) thou should'st
Be unconnected in the chequered web
That fortune's fingers weave in busy life—
A hermit 'midst the crowd—and standing firm
Where pleasure's vortex sweeps,——then let THIS be
A friend, solacer, in the stead of him
Whom fate denies it to.————

Go, then, my friend ! and may thy fortune be
High as the wish my soul doth hold for thee !
Be happy thou,—and that will surely shed
A spring-hue on my hopes, and breathe of peace
The freshness and the fullness o'er my heart.

Farewell, my Boy ! Thou need'st not much repine,
Though friends of worth, high-priz'd, be parted here.
Shall the magician idly sit, and weep
The loss of spells, howe'er so bright and fair,
While still he holds the word of power, to rear
New lights to gild his bow'r—new forms to fill ?——
'Tis the poor wretch that may in anguish mourn,
Whom heav'n hath blessed but with one charm to sooth
His dreary pilgrimage—who dreams he holds,
In peace and surety, the prize for life—
But wakes to find it lost—no hope behind.

Farewell !—This word's a potent spring
That touches all the bosom's chords and wakes
The heart to tones of agony—of hope
The knell, that calls up reminiscences
Which make fair Friendship's star-like form appear,
As dolphins, ray'd with brightest hues in death !

H. L.

Dams and Dam-making.

The necessity for making dams, and the method, ordinarily, at any rate, of constructing them in this country, have so long been familiar subjects to colonists, that it would seem almost superfluous to offer any suggestions upon them. Within the last few months, however, I have read in the press of the Colony professional opinions upon the storage of water, which show but too clearly that the first principles of dam-making are hidden from at least some of the wise and prudent. I may, perhaps, therefore be pardoned for inferring that, after all, I shall find some appreciative readers to this paper among the colonial public.

The art of dam-making in its various forms, and for various purposes, has, from the earliest period, occupied the attention of individuals, governments, and peoples.

The Egyptians, Romans, Hindoostanies, Babylonians, and other Eastern nations, embanked low lands, drained marshes, and conserved water, and though their works were hardly such as we have to deal with just now in this Colony, yet the principle of construction was much the same whether we contemplate the embankments which reclaimed the waste land of Babylon ages since, or those proposed to conserve water for the irrigation of a few acres of farm land in the Colony to-day. It may, however, be more to our purpose to note the effect of irrigation works in India, a country which, like our own (the Colony), presents great difficulties to cultivation owing to its physical and atmospherical characteristics, offering great drawbacks to natural production. It consists largely of alluvial flats, and its rains sudden, and of short duration, and chiefly at one season of the year only, so that the conservance of water during these rains for the future irrigation of the soil in the seasons of drought becomes, as with us, an absolute necessity, and the embankments, or "bunds," of India are the great artificial means which have changed desolation into teeming luxuriance.

It is accepted that Egypt was the cradle of the science of hydraulics, yet not until the seventeenth century, hundreds of years later, was any actual digest of principles laid down by which to carry out works of hydraulic engineering. Since then to the present day the construction of "embankments" throughout Europe, "bunds" in India, and "levees" in America, have afforded such varied practical experience that engineers have been enabled to determine the laws which should govern all works for the conservance of water, and hydraulic engineering generally, and many an able treatise upon the subject has been published in which theory is carefully laid down, with its co-efficient of practice upon every division or department. The making of dams and reservoirs is no minor branch of hydraulic engineeeing, and it is the absolute necessity for more extended and extensive works of this character for the conservance of water

throughout the Colony, which is being felt, suggests the brief dissertation upon the subject I propose, and I venture to hope that in dealing with the subject I shall be found free from odious theory, and yet reliable and of value practically.

I will conclude that the necessity for conserving water being felt, the first consideration is the selection of a site for construction of the dam. It may happen that the natural condition of a town or farm leave little or no choice upon this point; if so, and it be imperative to adopt some particular site, the best must be made of it, and the reservoir be constructed with due regard to the fulfilment of the requirements of the case, and its own stability—points upon which I propose to treat further on. If, on the other hand, however, one has to make a selection of site, and decide between the merits of several which offer, first a careful inspection of the physical features of the country immediately around should be made, and the natural water-shed determined, so that there may be no doubt as to the drainage of sufficient surface of water into the dam when constructed, and also that the dam be not of uselessly extensive capacity; that is, that the dam may not be so large that the extent of country draining into it cannot, under ordinary circumstances, fill it. Then next, whether the water from the reservoir, when constructed, can be led to such land as it is wished to place under irrigation; then, whether the material afforded upon the site for the formation of the embankment be suitable, and, lastly, though by no means least, the question of foundation for embankment must be considered. Assuming that no actual springs can be appropriated, and that the dam must depend for its supply upon surface drainage entirely, which is at any rate the more usual case throughout the Colony, and, having given generally the chief points which should prompt the selection of site, I will proceed to treat in detail such points as may assist in practical success of the carrying out of dam works. First, then, I take it, one should decide what the necessary supply required must be for irrigation and other purposes; then, as one should be prepared to stow at least sufficient water for six months' use, it is not difficult to determine the required capacity of one's reservoir. Everything, of course, depends upon rainfall. Now, it is estimated that out of the whole quantity of rains falling upon the earth's surface (which is supposed to be not less than thirteen hundred million gallons per second throughout the year*), one-half runs off the surface directly in rivers, one-fourth is evaporated and taken up by vegetation, and the remaining fourth passes into the earth, so to supply the springs which preserve a continual flow at all times of the year; but these figures, though representing the disposal of the entire rainfall upon the earth's surface, will hardly hold good for any one particular locality we may wish to deal with in this Colony, for it will be readily understood that the proportion borne by the available to the otal rainfall of localities varies much, being affected by the rapidity

* Hewson gives these figures.

of downfall, compactness of the soil, steepness of the ground, and nature of the vegetation upon it, temperature of the air, and other circumstances. I think, however, it is safe to assume that thirty per cent* of the total rainfall in most localities here is available for storage purposes ; thus the rainfall itself is one of the first points on which one should become acquainted before commencing dam construction, and as this has been recorded pretty carefully in most districts of the Colony, it can be obtained upon inquiry. The next thing, this knowledge being obtained, is, I conclude, to decide the quantity of water required to be stored, and to arrive at this we will assume that an average supply of about 5,000 gallons per acre per day (which is the quantity calculated for irrigation purposes in Italy, though in India they allow rather less than half this, and have in consequence a far less perfect system of irrigation,) is required for lands under cultivation ; that to water sheep from three to five gallons per head per day is necessary, and that a considerable quantity (varying with the extent of superficial area of dam) is lost in evaporation and soakage. Now, with a knowledge of the probable extent of lands to be irrigated, the probable number of sheep running on the farm, the fact that a cubic foot of water equals 6·23 gallons, and the figures I have given above, I think the size of the dam required, and its site, as far as regards the question of supply, may be easily determined. For instance, should it be required to irrigate 100 acres of land an average daily supply of 500,000 gallons of water would be necessary then to contain a six months' supply, and allow for evaporation and filtration, the reservoir must hold about 92,000,000 gallons, or rather more than 14,500,000 cubic feet, which quantity would be contained in a reservoir 300 yards in length, 500 yards in width, and an average depth of 11 feet (about), or in one 200 yards in length, and 300 yards in width, and 27 feet average depth, and to secure which the drainage of 4,000 acres of ground must be obtained, and a rain-fall upon it of three inches, which is not an unusual quantity during the fairly heavy rain of 24 to 48 hours, though the average rainfall may not exceed in the locality more than 15 inches in the year. These dimensions may represent a dam of larger extent, perhaps, than is as yet usual in the Colony, but this is, I have no doubt, because our farmers have not been accustomed to conserve in their dams a sufficient supply of water to secure them against the possibility of protracted drought, but have preferred rather to construct a small dam, place as large an extent of land as possible under cultivation, use the water as far as it goes, and trust to Providence for rain when the dam is empty.

As a rule, I believe for farm purposes it is less expensive and more safe to give the dam area rather than depth, and the first example I have given of dimensions affords as great depth as it is wise to adopt, —namely, 11 feet average, which is 22 feet at the dam head and

* In the Karoo districts this, I think, will be far too great a percentage to calculate upon. Twenty per cent. would be more correct, perhaps, and even that is the outside.

narrowing to nothing at its foot,—at the same time, of course, the greater the area the greater the loss by evaporation and filtration, and this loss it must be difficult to exactly determine, though I learn that experiment in the Karoo districts has proved it to be ABOUT one tenth of an inch per week over the entire surface of water.

The next consideration in determining the site is, whether the water can be led from the reservoir when constructed to the land to be placed under cultivation ; but this point is so easily determined by noting the flow of surface drainage during a storm, or with an ordinary spirit level, that I need not dwell upon it, but may pass on to the question of foundations and material for embankment. In the first place, then, a sound, water-tight bottom, where puddling be not necessary, should if possible be chosen. Springs rising IN the dam should be avoided (they cause endless difficulty) also the outcrop of porous strata which could carry the water away should, of course, be avoided ; and if the surface stratum be pervious to water it should be excavated to a sufficient depth to reach a water-tight bottom.

As we come next to consider the matter of embankment—the "dam" itself, in fact—which is of chief importance, we will treat upon its construction in detail from foundation to completion. First, its foundation must be a subject of careful investigation, and the best one can adopt is undoubtedly clay, and next to clay a compact rock, free from fissures and springs (which latter rising under an embankment would be most disasterous). The surface soil should always be removed to the depth of some suitable, sound bed, and to the proper width of base of embankment. The question of foundation being settled, the next for consideration is the materials to be used in the embankment. It is accepted that the stability of a dam depends rather upon the weight of material used in its construction than upon its adhesive properties, thus a heavy soil is the best ; moreover, the natural angle of repose in such earths is far less than in sandy or loamy soils, and so the dimensions of embankment may be less with the one than with the other, and therefore the cost of construction less also. It would not be possible, however, to treat upon such minutiæ as these, so I propose, in giving dimensions for general guidance in dam construction in the Colony, to deal with the average soil that is met with, which my own experience has shown me to be clayey loam, heavy, easily worked, and of a close, adhesive character ; a soil whose natural angle of repose is about 40° to 45°, or one to one, and which forms a most excellent "muck." A dam formed of this material, then, should have a width of base equal to five times its proposed height ; it should have an outside slope of about two to one (or an angle of 26°), and an inside or water slope of three to one (an angle of 18°). The width of crown of embankment is not of great importance. About five feet, however, it is usual to give. The centre of embankment should be some height (say three or four feet, more or less, according to its length,) above the corners, so that an overflow, should it occur, shall take place at the flanks rather than

at the centre. It is well, too, to plan the embankment with a slight convexity towards the water if practicable, the better to resist pressure. It should be formed in thin layers of the earth used, laid somewhat dished to give bond to the work, as it is carried up, and before it can have fairly settled into a solid mass. In the centre of embankment from foundation to within about five feet of crown—that is, to level of high water line—should be a masoned or puddled wall, in width at base about one-third its height, and tapering to about two-thirds this thickness at top. If this be of stone it should be constructed of heavy rubble masonry, set in good lime mortar, and well bonded and grouted every two or three feet. If of clay, a simple method of working the puddle is to erect a hurdle fence on either side of the wall, and then to drive a flock of sheep up and down it several times upon each and every layer or clay. The inside, or water slope, at least to high water line, should be pitched with large rubble stones, set dry, and not less than a foot deep. The outer slope should be turfed or sown with grass seed, as also the crown, but not planted with trees, as is often recommended ; the roots penetrate the embankment, and form escape for the water. It is well, at any rate, till the sides be well covered with grass to fence them in from cattle, and a catch-water drain at the foot of slopes is always advisable to carry off surface water.

It may be interesting to some to trace the "wherefore" of rules laid down, which, being so simply arrived at, I will attempt an explanation. First then, the great width of base for embankment is necessary because the lateral pressure of water is equal always to its vertical or downward pressure, therefore it will be seen at once that whilst in theory the top of the wall of a dam ten feet deep has no pressure at all to resist, though the bottom of the dam itself has to bear a pressure per square foot equal to ten times the weight of a cubic foot of water (that is, one cubic foot is equal to 62·5 lb.), yet the lowest part of the wall of the dam has to resist an equal pressure with the bottom ; therefore, whilst the top of an embankment need in theory be no thickness at all, its bottom must have weight (which breadth, of course, gives) enough to resist the heavy pressure against it, and so the depth of base of embankment is increased according to the height of water standing against its side. In other words, the weight of a cubic foot of water being 62·5 lb. the vertical pressure per square foot on the bottom of a reservoir ten feet deep is equal in lb. to 62·5 × 10, whilst the horizontal pressure against an entire vertical section of one foot wide of the dam wall is equal to half the weight of a cubic foot of water multiplied by the square of the depth (that is, 31·25 × 100) because the pressure increases as the square of the depth. I trust this is explicit, for I fear that without a sketch, which it would trouble you too much to reproduce, I can hardly make it more so.

Then the top or crown, though I have said that in theory it has no pressure to resist, practically it has, for the waves on a wide sheet

of water are such force that no small stability is required to resist them, and there is, too, a certain amount of unavoidable trampling upon an embankment, and other minor causes, which render a certain breadth of crown indispensable, and from three to five feet should at least be given, and even more if required. The reason for differing breadths of base and crown, then, having been given, the slope of sides is explained, with the exception of why the inner, or water slope, should have a more gradual incline that the outer, which (judging from an article or letter written upon dam-making in one of our colonial journals, not long since, by a professional man of no little repute) one would suppose to be a matter of opinion between engineers. The reasons are, first, that the more gradual the slope the less the effect of waves and the washing action of the water upon the embankment, against which, too, the dry stone pitching is provided, and secondly, because the angle of repose of wet earths is much ess than that of dry earths, so much so that even a slope of four to one is needed with some earths in a wet situation for embankments.

I have advised that width of reservoir be adopted rather than depth to reduce the cost of earth works in embankment, for since the pressure of water is as its depth, and not as its superficial area,* the same embankment would resist the pressure of a sheet of water a foot deep and the width of an ocean (if still), as would be required to resist a surface of the same depth, and only a hundred feet in width.

The discharge pipe to a reservoir should be fixed with due consideration to the quantity of water to be discharged, and the required rate of discharge. It should have high pressure valves, and should be carefully set in solid masonry sufficiently above the level of bottom of dam, that it may not be choked by any deposits taking place. It should be protected against this, too, by a grating at its entrance. Ordinary dams, constructed for irrigation purposes, should not need more than this besides the provision for overflow, but all larger reservoirs should be provided with waste sluices, in case of floods, to convey the surplus water away behind the embankment by "ordinary dams." I mean those which the physical condition of nine farms out of ten in the Colony compel one to construct if irrigating be contemplated, and upon which advice, if needed at all, will chiefly be sought. But at the same time, if it be possible to conserve the continual supply of a spring, or to construct a dam across a continually flowing stream where it passes between a narrow gorge, or even simply across its ordinary bed (if by so doing a sufficiently high level of water can be obtained to allow of its being led on to the lands), this should be done, and whilst the general principles of embanking

* I read a short time since a report of the meeting of a public Board, in which it appeared that their architect had recommended building "partitions" in a reservoir which leaked, "to reduce the lateral pressure" which he considered to be the cause of the leakage. This principle could have hardly been accepted by the author of such advice.

that I have endeavoured to lay down hold good in either case, yet a special feature may exist which will admit of, and even render necessary, perhaps, a deviation from rule. Of course, for instance, in conserving continually flowing water a reservoir of less capacity will be required, and a six months' supply would be out of the question.

In constructing a dam across a river where it flows through a narrow gorge, the quantity of water so conserved is more likely to be represented by depth than area, and so greater strength of embankment is required, more care as to discharge pipes, and especial provision as to overflow and surplus. In such a case, too, a great difficulty may be caused by silt which would be brought down by the river in flood time, and being deposited in the reservoir would soon fill it. I have myself seen a dam of fifteen feet deep filled almost by such silt as this in three or four years after construction only. To deal with this effectually there is great difficulty; indeed, I know of no method of satisfactorily preventing it; the quantity of deposit may, I think, however be considerably reduced by constructing the dam, if possible, where but little fall has occurred in the river for some distance, the reason of this will be seen at once. Where water has the greatest fall its velocity is most, and therefore its power of carrying along or working in suspension heavy matters is most. Whilst a stream flowing at the rate of six inches per second will carry fine sand or clay, one of three to four feet per second will carry shingle and large gravel, and so on, as the velocity increases the power of a current to hold in suspension and propel heavy bodies increases too, so therefore, the less the velocity of a stream for some distance before entering a reservoir the less will be the deposit. In cases, however, where it be not possible to construct the dam in such a position, the heavier deposits may be prevented from entering the reservoir by excavating a trench of sufficient capacity at the entrance to reservoir across the stream, supplying it so that the force of the current may be somewhat checked before entering it, and the heavy silt be precipitated into this trench, from whence, at low water, it can be easily dredged.

Beyond these helps to the difficulty I know of nothing but removing the deposits by dredging in the dam itself as they accumulate. In concluding these few notes on river dams I would wish to enjoin particular caution in such structures as to foundations, and would particularly advise that, if possible, an engineer be consulted, and the work carried out under his supervision, and to his plan and specification. I say "particularly" in such a case, that I deem it always "penny wise and pound foolish" to dispense with professional assistance.

The interest of my subject, and the wide field it affords for treatment in detail have led me already much further than I had contemplated going, and yet I have left many important points untouched; for instance, I have enjoined caution as to foundations, condemning

the adoption of a site for dam works where such is unsound, and yet I have offered no suggestions as to their improvement by use of sand piles or other constantly adopted methods when it happens to be impossible to obtain better. Should any reader, however, care to seek further information, I shall always be glad to afford it if in my power, and if what I have written will induce criticism I shall feel glad, provided such criticism be honestly given, for I believe there has been a most diversified experience of dam construction in this Colony, and much information upon the matter might be gained if those who could would but afford it.

In conclusion I will venture to offer a few rules to those who may need them as to measurement of earth work. Would space permit, extracts from valuable and reliable tables might be given, but as it is a little calculation with pencil and paper must supply the lack of those wishing to count the cost of proposed works, or the value of works actually carried out.

To obtain, then, the cubical contents of an embankment in feet, first find its sectional area thus: add top and bottom widths together, divide by two, and multiply by the height, this obtained, and the embankment being uniform, multiply by the length, and the result will be in cubic feet, divide by twenty-seven to obtain cubic yards. Should the embankment slope off uniformly to one end, then, to obtain its contents, add the sum of the sectional area of the two ends (obtained as above) to four times the area of the middle section, multiply by the length and divide by six.

Should the embankment, however, have varying slopes, it must be measured in different sections by the foregoing methods, and the sum of these sections taken to give contents of the whole. As the roughest guide only to cost, I may say that 9d. per cubic yard is paid in the Colony to good English navvies for excavating and filling in constructing dams, but a watchful master, with good native hands, may do the work for a less sum than this I feel sure.

If in constructing a dam it be contemplated to raise the embankment at a future time, so as to obtain greater depth of water, its base must of course be set out the full width required by a dam of such height as the one in construction is contemplated to be upon final completion.

Sydney Stent, C.E.,

Colonial Public Works Department.

Graaff-Reinet, December 3rd, 1874.

The Hunter and the Dassy-Adder.*

Beside the broad Zambezi,
  Where the sounding torrents go,
Headlong and down the precipice
  To the yawning gorge below.
In billows wildly dashing,
  With th'mist-clouds rising high,
Blending in rain-bow colours
  Against the deep blue sky.
Where th'voice of th'great "smoke-sounder," †
  Like the ocean's ceaseless roar,
Plunging from precipice to craig,
  Is heard for ever more.
Far over vale and mountain,
  The deep sound passes on,
The roar of the "leaping waters;" ‡
  The roar that is never done.
Where the scarlet aloes blossom,
  And, floating on the stream,
The scented blue nymphæa, §
  In long succession gleam.
Where the pelican and the blue-crane,
  And the snowy-white osprey,
O'er the golden sands of the river
  Are watching their finny prey.
Above that wooded valley,
  The rocks are piled on high,
Where the wild bee stores her honey
  And the red-winged douries fly.
O'er the primeval forest,
  Where the giant baobab
Lifts its gigantic branches
  O'er the twining wild lab-lab.

* There is a tradition amongst the natives of South Africa that such a creature exists as the Dassy-adder. It is described as a hairy-headed serpent, some six or eight feet in length. The head closely resembles that of a Dassy (hence the name), whilst the remaining part of the body is marked and fashioned like that of the puff-adder. It is said to frequent precipices and rugged localities, consequently a neighbourhood that is celebrated for honey is looked upon with superstition and dread. Many wonderful legends respecting this serpent are related by the natives, and even a portion of the Dutch inhabitants believe in its existence. One of the most common of these legends is, that if you are bitten by the Dassy-adder the creature will at once make for the nearest stream of water, and take a plunge, in which case your death is certain; but if, however, on the contrary, you are the winner of the race, and plunge into the stream before the adder, the bite will prove harmless, and your life will be saved.

† Native name for the Victoria falls.

‡ Name of a portion of the falls.

§ *Nymphæa stellata*, the blue water lily.

'Twas there that brave Koudela,
The hunter, armed would go,
With stabbing spear and assagai,
Against the buffalo.
Against the tawny lion,
And the stern rhinoceros,
The water-buck and the eland,
That feed on the "quagga grass."
Regardless of the dangers
That might befall the chase,
For the Dassy-adder's home was there
In that solitary place.
That hairy-headed adder,
With eyes that fascinate,
Was lord of the rugged precipice,
In ambush there would wait.
'Twas there that brave Kondela,
By the wild hive in the wood,
Strove with the furious adder
Till faint from loss of blood.
The dreaded fangs of the serpent
Had pierced his naked side;
It was then a race for existence,
"Oh! for the stream!" he cried.
"Oh! for the healing waters,
My ebbing life to save,
Before the Dassy-adder
Can reach the foaming wave.
For I know the wily serpent,
Through bush and break will glide,
Swiftly to reach the river,
And plunge beneath its tide.
My life would then be ended
'Neath the yellow-woods broad breast,
Alone, and unbefriended,
My wounded corse would rest."
Then swiftly through the forest
Kondela sped that day,
Regardless of each crag or thorn
That might beset his way.
Towards the broad Zambezi,
Bleeding and faint, he hied—
But the race was won by the adder,
And the brave young hunter died.
Beneath the thorn-trees' branches,
Beneath the checkered shade,
On the banks of the lone Zambesi,
His silent corse was laid.

Alone and unbefriended,
By the sounding river's stream,
His young life there was ended
Like a passing idle dream.
The sun rose up on the morrow,
A broad and glorious blaze,
As if, in the word, no sorrow
Could darken the happy days.
The pink-flowered amaryllis,
Its petals did expand,
And the golden snipe, with her partner,
Strayed o'er the yellow sand.
The pelican and the blue-crane,
That watched by the river-side,
Spread out their wings to the sunshine,
And the snowy osprey cried.
From out the heavens above them,
With loud and strident note,
Whilst the silvery beams of the morning
O'er the broad waters float.
All things were glad and glorious,
Rejoicing in their breath,
But alas! for the brave young hunter,
Alas for his early death!

W. E. Barker.

Kimberley, November 10, 1874.

Our recent Floods.

Through the recent wholesale destruction of bridges and dams, a very large loss has been sustained by the Colony. It has been roughly calculated, that it will take over £200,000 to replace the structures swept away in a night by the rush of waters. It may, therefore, not be an inopportune moment to enter upon the consideration of the question, as to whether it would not be possible to guard against our periodic losses, by superseding the present system of bridging South African torrents, and putting down something very much more economical and lasting in their place. To this end, we have had our attention directed to the plan adopted in some of the highlands of Scotland by a celebrated military engineer, and which has been perfectly successful in providing against the disastrous effects of sudden freshets and "spates." In a few words—the plan may thus be

stated. Instead of throwing a bridge across the narrowest part of a river, and trusting to the solidity of the foundation or culverts of a few arches that support the woodwork and parapets, and distribute the weight of traffic between them, the engineer selects one of the natural drifts of the stream to be crossed—*i.e.*, one of its widest and shallowest parts—as the basis of his venture; and then builds a broad and substantial wall upon the bar of rocks that underlies the bottom of every natural ford. This solid causeway may be made twenty or thirty feet wide, according to the amount of traffic, or the *genius loci*, and the nature of the stones and materials lying ready to his hand. These causeways are pierced every ten feet or so, by circular arches, about six feet in diameter, and substantially constructed out of dressed stone and hard bricks throughout. A line, drawn horizontally through the *centre* of these arches will represent the ordinary water line, and at the ordinary flow of water after a day's rain ought to be sufficient to carry off the stream with ease, and this without filling up more than half of their space. When, however, the river suddenly rises, the mass of water is impelled over the solid causeway just as a swollen brook finds its way over the largest stepping stones, viz., by simply *cascading* over them. As the arches are circular, and rest upon a solid bed, the raging waters are not pent back *laterally* and forced to swirl and scour the river bed, and so undermine the piers of the bridge as in ordinary bridges, but they will at once rise and mount over the obstruction in their way—without harming it. Of course, traffic to some extent will have to be suspended while the water is very high, but by means of guide ropes, it would be possible to take a heavy wagon across a smooth and solid causeway, even should four or five feet of water be sweeping over it in an unbroken mass. As soon as the waters subside below a certain line, the arches will carry off the still swollen stream, and this without destroying the masonry of the causeway by the action of the flood. Naturally the work will have to be very solidly constructed and well laid in lime and cement, but it will last for a very long time indeed, and as lime and stones are abundant all over the Colony, there need be no fear as to inordinate expense, when compared with the present high cost of transporting iron and wood across our sandy deserts from our sea ports. In speaking thus positively of the relative advantages of these causeways, we are not talking of railway bridges, but simply of the bridges that the peculiar features of our frontier districts require, and that speedily. If, however, we are too poor for suspension bridges, and do not approve of drawbridges as in Holland, and if, moreover, wood can be got at more handily than iron or stone, the Welch plan of building bridges is worth glancing at. In some parts of Wales—low-lying and apt to be flooded, they construct their bridges over very wide but shallow and sandy bottomed rivers—by describing a segment of a very big circle and building the bridge on a series of twelve or sixteen blind arches, the biggest of which is egg-shaped and central, the

others gradually diminishing in size and circular, till they are far beyond the ordinary flow of the river and almost co-existent with the roadway. In ordinary times these blind but auxiliary arches get choked up by sand and grit and rubbish, and for all practical purposes are as concealed as if buried in solid ground. When, however, the river swells after rain and overflows the reaches, and begins to scour its bed and banks, these choked-up arches get cleared out by *the deepening of the bed* and so carry off the surplus water, so that the tourist often finds to his astonishment that a bridge which in dry weather only presented three or four arches in his sketch, will in winter present ten or twelve additional outlets, and thus the course of traffic will scarcely be interrupted, except at the submerged end of the bridge. A diagram will at once make this clear, but we are debarred from producing one here except in a very elementary form. The main difference between the Scotch and the Welch plan is this—that in the first, provision is made to cause the swollen stream to *mount over* the obstruction in its path; in the second, provision is made for *lateral expansion* while the river is deepening its channel, and trying to work its way out through the auxiliary arches constructed for that purpose.

It may be said that this is mere theory. Let us therefore examine into the alleged fact that natural drifts are nothing more than belts of sand overlying a rocky bar in the bed of all streams. The widest part of a river is always the shallowest—and why—because the river finds it easier in one part of its course to scour laterally, than to scour downwards and deeply in another. There is in fact an obstruction. If the banks be rocky the river is sure to be very deep. If the banks are not rocky and the river runs wide, its shallowness depends upon a rocky floor. From time to time the scour of the river is brought to a standstill upon this bar, and it becomes for the nonce a narrow but concealed sandbank—dangerous for boats—but affording solid footing for those who may try to ford their way through.

In the same way, it seems perfectly feasible to dam up large bodies of water without danger, by scooping out hollows and deepening natural depressions of the soil—not by damming up the course of a small stream by a solid wall, as we are now foolishly doing, but by diverting the stream *laterally* just as is done by an aneurism of a large blood vessel. To do this, a stone bridge, must cross the stream at a suitable spot, and its arches must be protected by flood gates. On the upper side of this pierced causeway, and at both ends, if needed, a number of piles backed by masonry or stones should be driven in to protect the banks for about twenty feet, and in the centre of this piece of masonry there should be a circular arch protected by a flood-gate also. When the river is low, the arches of the causeway may be half closed so as to dam up the river, and cause it to rise sufficiently to flow through the side arches into the reservoirs. When these are full enough, the side gates can be closed, the barriers

removed, and the river pursue its course. When the river is high it will flow over the causeway unimpeded; when low, it will accumulate in the side reservoirs; and year by year these lakes will become deeper and wider, and bring more and more land into cultivation, through the certainty and safety with which they can be emptied and filled.

At present the great danger caused by all dams, as constructed in the Cape Colony, is their tendency to give way at the point where they unite with the banks. A tremendous mass of water is impelled against an unyielding mound; the river banks are slowly sapped and scoured away, until at length the bursting of a waterspout, or a thunderstorm causes the whole mound to collapse and slide from its moorings, and flood the country with ruin. By the plan here sketched, and in our opinion well worthy of trial on a small scale in a country so dry, and so peculiarly bare of trees and forest growth as the Cape, we think out of the nettle danger we may pluck the flower safety, and for the future regard our recent losses by flood, as a blessing in disguise.

O.

In Memoriam—A. G. Bain.

BY AN OLD FRIEND.

(Lines written on first going down the Ecca Pass after the completion of the new road

In the Highlands of Scotland it sometimes is said,
If you'd seen these fine roads just before they were made,
You would lift up your hands, and cry "Bless General Wade."
If the Ecca you'd seen ere this road was projected,
And its hills and its hollows all duly prospected,
You'd surely bless Bain, who the line here directed,
And its gradients and curves all so deftly inspected;
And the old-fashioned ruts and sharp turns rejected;
And all the weak points in its walls soon detected;
And our safety and comfort in no place neglected.
'Stead of breaking your neck, and perhaps, too, your wagon,
Not a yard in its length need you now put your drag on.
Then bless you! dear Bain, the best of road-makers,
We may travel this path without fearing neck-breakers;
May so smooth be thy way, not e'en fearing bone-shakers.
As we travel along now without the least pain
Let us think of the maker, and cry "God bless thee, Bain."

H. H.

Education in the Colonies.

Mr. Du Cane has just resigned office as Governor of Tasmania, and one of his last official acts was to attend the annual meeting of the Council of Education. That body presented him with an address, to which he gave a reply so able, and bearing so much on Education in the Colonies generally, that we give here the most important parts of it. After some preliminary remarks, His Excellency said:

But passing on to the merits of your own system in particular, I can only say this, as a thoroughly disinterested observer, that if I thought, as some say, that your scholarships merely served to advertise in England the educational liberality of Tasmania, as a dead loss to the Colony of so much intellect as may have been exerted to attain them, I should be the first to join in the cry of away with them as a useless and expensive luxury. If I thought, too, that your whole system is one which, as I have seen it described, withholds the bread of instruction from the poor in order that the rich may enjoy intellectual refinements and dainties, I should say at once the sooner such a system is entirely remodelled the better. But none, to my mind, but the wilfully blind can shut their eyes to the fact that the scholars you have sent forth are gradually returning to you. Nor can it be ignored that, while each year brings a larger number of candidates for the A.A. degree, the most successful, as a rule, have been anything but the sons of those who can afford to pay for intellectual dainties. I have seen a large proportion of your first-class, at all events, composed of youths who have worked their way up from your common schools, and who in all probability, never would have done so without the aid which your system has afforded them. And the result of this annually increasing competition for scholarships and degrees must act on the general teaching power of the Colony, as well as on those who are taught, and so far, to my mind, from keeping the bread of instruction from the poor, it will give the poor a more liberal supply of bread of a better quality, and increase their chances of rising also to the good things at the top of the ladder. Even if your scholars only come back to take part in tuition, it is a great point gained, and they will more than repay their country the assistance it has given them. But why are they not in time to stock your learned and scientific professions, and why are they not in time also to take their fair part in the active public life of the Colony? I know it is sometimes said that English public life is not colonial public life, and that colonial public life requires no special training whatever, but the exercise of the very commonest of common sense. Whenever I hear or read anything to that effect, I always think of a passage in the writings of Archbishop Whately:—"While the pedantry of learning and science has often been dwelt upon, and deservedly ridiculed, there is another danger on the oppo-

site side, which is rarely, if ever, mentioned; yet it is a folly quite as great as the other; of a yet more intolerable character and still more hopeless—I mean what may be called 'the pedantry of common sense and experience.'" For one person who is over-bearing you on account of his knowledge of technical terms, you will find five or six still more provokingly impertinent with their common sense and experience. "What has political economy, say they, for example, got to do with such simple matters as taxation, the education of the people, the national debt, and so forth. We want only common sense and experience." But their common sense will be found to be nothing more than common prejudice, and their experience will be found to consist in the fact that they have done a thing wrong very often, and fancy they have done it right. In former times men knew by experience that the earth stands still, and the sun rises and sets. Common sense taught them that there could be no antipodes, since men could not stand or walk with their heads downwards like flies on the ceiling. Experience taught the King of Bantam that water could not become solid. And the experience and common sense of one of the most observant and intelligent of historians, Tacitus, convinced him that for a mixed government to be framed as to combine the elements of royalty, aristocracy, and democracy must be next to impossible, and that if such a one were framed, it must inevitably be very speedily dissolved. But then it is said, granted that colonial public life requires training as much as the English, it must be training of a different sort; and however well the curriculum of an English university may suit the one, it is unsuited to the other. I know that it is very difficult to disabuse people's minds of the idea that our great English universities are, even now-a-days, nothing more than what Mr. Bright once called them, "The home of dead languages and undying prejudices;" and that in the new Museum of Oxford, or the Cavendish Laboratory of Cambridge, natural science, in all its branches, may be studied in the most practical form. But I suppose it will be at least admitted that the training which suits men for the public life of one Australasian colony will most probably suit them for that of another; and here, perhaps, I may be allowed to adduce a case in point. When I was travelling in New Zealand a few months since, I found that of the ten members which the province of Canterbury sent to the central Parliament of the colony, six had been educated at Oxford and Cambridge, and as the Superintendent of the province, himself also a University man, told me, were amongst the most useful and practical members of the House. Depend upon it that if, as these colonies harden from the gristle into the bone and sinew of manhood, they are to be anything but a strange motley chaos of struggling democracy—there must be training of some kind for your public men. And depend upon it further, that the strongest thread in the tie which binds the children to the mother-country is not the kinship of race alone, but the similarity of training, manners, and institu-

tions One point further in dealing with this part of the subject I will venture to urge, and it is embodied in a single sentence which I found the other day in a leading article in the *Times*. Speaking of the debate on the Education Estimates in the House of Commons, the *Times* says :—"The example of all the world that desires to be called civilised, foremost in it our own colonial progeny, leaves us no choice but to force education to as high a point as can be reached, and upon as many as can be included." There is my point, not the best education merely, but the best education to the greatest numbers. From common school to scholarships let your scheme be a really symmetrical whole, and in your zeal for superior education, never neglect the paramount obligations of primary instruction. No one ought to pass six years in the position I have held without adding largely to his stock of experience, and most happy shall I be if in time to come I can ever turn that gathered experience to your service. But while my experience may after all profit you but little, on the lessons which your rising generation, male and female, are learning, depend the future fortunes of the entire colony. To the successful candidates then, of both sexes, I offer my sincere and hearty congratulations, but here, for your benefit, I am going to call up a very peculiar spirit of mine. Let me beg of you to remember that so far from having this day finished your education, you have only had the foundation on which to rear the structure, and that that structure is one which even a long, active, and well employed life will leave incomplete at its close. Be sure of this, that the longer you live and the more you cultivate and develop your intellectual powers, the more you will realize the correctness of the saying, that the utmost knowledge a man can attain to is but a little learning in comparison with that of which he must remain in ignorance. The view is like that of an American forest, in which the more trees a man cuts down, the greater is the expanse of wood which he sees before him. Beware, then, of the fallacy of a finished education, for, false at all times, at the outset especially of the great battle of practical life, I do not know a more specious or mischievous delusion. Practical life has been recently defined to be a sum in which your duty, multiplied by your capacity, and divided by your circumstances, gives the fourth term to the proposition, which is your deserts, with great accuracy. As you persevere, then, steadfastly in the path of duty, and enlarge your capacity by intellectual culture, the more energetically you practice the habits of earnestness, accuracy, perseverance, and thoughtfulness, which have so often formed the text of my little educational sermons, the larger evidently becomes the capital of your stock-in-trade, and the greater the dividend you may hope to receive. But standing as I do here for the last time to address a Tasmanian audience on education, I must also add that greater and richer by far will be your dividend if you steadily resolve that your intellectual and moral culture shall go hand in hand. Make that resolution, and keep steadfast to it, now in the bright and golden sunshine of youth ;

and let me, as one for whom all the freshness of that early sunshine is past, remind you that

> "Youth waneth by increasing.
> Beauty, strength, youth, are flowers, but fading seen;
> Duty, faith, love, are roots, and are for ever green."

Culture, it is well said, is "to know the best that has been said and thought in the world," while "conduct is to turn that knowledge to the best, the most moral, the most righteous account," and conduct and culture together make up the great sum total of human life and action. In this partnership conduct owns three-fourths of the capital, for culture without conduct is after all but knowledge of the head. But the union of conduct and culture means knowledge of the head combined with that of the heart; it means that knowledge which has power over life and death, over the body and the soul, and in that knowledge and that union is to be found the only sure sign of the progress of nations, the very heart's core itself of civilization. I say, then, let the rising generation of Tasmania inscribe on their banners the union of "conduct and culture," and let them go forth under that banner manfully and truthfully to fight the great battle of practical life. In that battle they may fail as others have done before them, for the race, as we know, is not always to the swift, nor the battle to the strong. But failure in such a cause, faithfully fought for, will bring no dishonour, and they will be saved from the reproach of that aimless, hopeless, unprofitable existence, which is worse than an early death. And if they succeed, then perchance in the good time to come, when the memory of my governorship is beginning to wax dim, it may be their lot truthfully to claim for themselves in the best, the noblest, the purest, the most Christian sense of the words, the proud boast of the Athenian statesman and general, "That he had made a small state great."

Note on the Geology of South Africa.

To the Editor of the Cape Monthly Magazine.

Potchefstrom, Nov. 15th, 1874.

Dear Sir,—I have just returned from the "remote" parts of the Transvaal, and now for the first time read Dr. Shaw's letters.*

Their complete variance with generally known facts, and their tone, render it unnecessary for me to treat them as criticism; moreover, my reputation as a geologist can hardly suffer at the hands of Dr. Shaw.

To show, however, how completely at sea he is when he dabbles

* It gives me great concern to find that I have been the cause of such a considerable development of bile within the poor Dr.'s system by not placing *his* name on my new map. If he will only *do* something to give me an excuse, I'll try and *squeeze* his name into my next publication.—E.J.D.

in geology, I will merely take his very authoritative denial that there are any *dolerite* dykes, or even dykes at all in the area marked on my new Sketch Geological Map of Cape Colony, and against his statement place the authority of Mr. Allport, the eminent petrologist, who has microscopically examined specimens that I collected in the area in question, while on a hasty trip to the Stormberg :—

Stormberg	Dolerite.
Top of Kop near Fletcher's House	Dolerite.
Mr. Vice's (Stormberg)	Basalt.
Road twenty miles north of King William's Town	Dolerite.
Wind Vogel Berg	Do. with pscudo-morphs after olivine.
Predikant's Kop (Stormberg) ..	Basalt.

As regards Dr. Cohen's letter, I need only state that my pamphlet was published in Cape Town in 1871, and was in London before he left Germany. Since I saw him in Cape Town in 1872, when on his way to the Diamond-fields, I have neither seen Dr. Cohen nor any of his contributions anent the Diamond-fields ; and if, after his researches, he has come to the same conclusions as myself, I can but feel gratified.

Yours very sincerely,

E. J. DUNN, Geologist.

[In justice to Mr. Dunn, and in confirmation of his statements given above, we print the following from the original documents now before us. The names mentioned are sufficiently authoritative to speak for themselves.—*Ed. C.M.M.*]

32, Charing Cross, May 5th, 1874.

Dear Mr. Dunn.—I enclose you Allport's memorandum on some of your rocks. I have all your things carefully put away at the office until you return. * * * * *

Yours sincerely,

R. DAINTREE.

Pniel.—Amygdaloidal dolerite, much altered ; the large cavity is filled with calcite. The yellow mineral surrounding the small cavity, and also disseminated through the rock, is epidote.

Du Toit's Pan.—Dolerite, augite, plagioclase, and magnetite.

Stormberg.—Dolerite.

Pniel, one mile up.—Appears to be a quartz vein in altered dolerite.

Top of Kop, near Fletcher's.—Dolerite.

Colesberg Kopje.—Contains numerous surpentinous pseudo morphs of olivine and black grains of magnetite with a little calcite. This specimen is very much altered, and though there is no certain evidence of felspar, it may be merely an altered dolerite, as these rocks are very variable, and local varieties occur in which there is little or no felspar. If, however, this is a normal specimen, it can scarcely be called a dolerite.

De Kruis, near Neuhad.—Volcanic breccia, or ash, consisting chiefly of fragments of trap.
Mr. Vice's, Stormberg.—Basalt.
Klipfontein.—Granite (?) containing orthoclase, plagioclase, and a little hornblende.
Klipfontein, Namaqualand —Highly altered dolerite. This would be called a diabase.
Road, twenty miles north of King William's Town.—Dolerite.
Ward, Vogelsberg.—Dolerite with pseudo-morphs after olivine.
Predikant's Kop, Stormberg.—Basalt.
300 yards south of Nunies.—Basalt. This appears to be a nepheline basalt. The grey cloudy grains are, I think, nepheline, though there are no well defined crystals.
Eleven miles east of Ezelberg Poort.—The yellow mineral is epidote.

The Sylph.

FROM THE FRENCH OF A. DUMAS.

A sylph am I, a dream, a shadow, nought,
Tenant of air, a spirit-mystery,
A light perfume by passing zephyrs caught,
A living ring that weds man to the sky.

Flung from my body pure, a lustrous train
Mingled with evening's floating vapour, gleams ;
Invisible I shun all eyes profane ;
Only the spirit sees me in its dreams.

From the clear lake the glimmering sheen I bring,
With light wing skimming o'er the rosebuds sweep ;
Then gaily poised upon my starry wing,
View myself mirrored in the crystal deep.

Sometimes I leap into a garden bed,
And steep my senses in the rich perfume ;
My tiny weight scarce bows the floweret's head,
While I am nestled in its velvet bloom.

Beside your hearths all fearlessly I creep,
Fill half-closed eyes with vision more intense ;
And on the pure brow of a child asleep
I love to pour the dreams of innocence.

When over all the veil of night is spread,
Trailing a golden path, I mount on high ;
While mortals cry—" Behold, a star has fled,
A presage sure that one we love will die."

J. G.

THE CAPE

MONTHLY MAGAZINE.

A Letter from Dr. Livingstone.

[The following very interesting letter from Dr. Livingstone was received by Sir Thomas Maclear only on the 5th of last month. It is one of many missing ones referred to in other communications, and which, after knocking about through mysterious postal routes in Central Africa, may yet "turn up" as unexpectedly as the present one, which Sir Thomas has kindly placed at our disposal for publication.—Ed.]

Town of Moenekus, Manyema, Sept., 1869.

My dear Friends Maclear and Mann,—I have not the faintest hope of being able to send a letter for many months to come, but I refresh myself by having a little converse with you on paper, and make a little preparation for the time when the bustle of sending off a packet may arrive; and first let me say that I very cordially sympathise with Mr. Mann in his affliction. When I started on this trip into the country of the cannibals, a very gentle ascent made me blow like a broken-winded horse, and if the ascent were at an angle of say 45°, about fifty yards made me stand in distress. Two hours were as much as I could stand in one day, but I gradually gained strength in the eighty hours' travel between Tanganyka and this; so I hope that our friend, who is much younger than I am, has gained similar if not greater improvement. I earnestly wish it may be so for the sake of his wife, himself, and his young dependants. I am thankful to think that my lung is now sound. One inflammation of that was worse than ten fevers—that is, the fevers treated by my medicine, and not by the dirt supplied to Bishop Mackenzie with the name. I am hoping to be allowed health to finish the work I have taken in hand. I must accomplish the task if I live—though, had I known all the hardships, toil, and time required, instead of engaging to examine the watershed I might have preferred to have had my head shaved, and a blister put on it. You will see further on what I have to do, and the end to which I strain.

You may remember that I saw the Luabala coming out of Moero. Report said it entered another very long lake in the N.W., and was

joined by the Lufira therein. On coming out of this lake or lake-river, which I am fain to call Lake Webb, it went west, but no one knew whither. I thought it might be the Congo, and as soon as I recovered at Ujiji went fifty or sixty miles up Tanyanyeka to avoid a great mass of mountains on the western shore; then from a point south of the islet Kasenge, struck west and north-west, and found myself in the great bend of the Lualaba. Having accomplished its westing, it goes away north and N.N.E. to, I suppose, the Nile. It is not a branch of the Congo certainly. It is the great western or central (?) arm into which Ptolemy makes the Nile fountain waters collect. Tanganyika is the eastern arm (?) and both from their size and currents may be called lacustrine rivers, or, if that is too Burtonesque, lake-rivers. I am working out Ptolemy's Nile. I would rather have had it my own, but slowly and surely has the light dawned on me that we must give up the grandiloquent phrase about solving a problem which has baffled geographers for the last two thousand years. Ptolemy's informants must have come in here before the second century of our era, and all that they left for moderns is the re-discovery of what had sunk into oblivion like the circumnavigation of Africa by the Phœnician admiral of one of the Pharaohs, about B.C. 600.

His statements that in going round from east to west he had the sun on his right hand stamps it as genuine, though to Herodotus it seemed incredible; and Ptolemy, by placing the sources between ten and twelve south, and making them collect into two or three great arms, showed that he had learned from his predecessors substantially correct geography. His errors are such as would naturally be made by men transcribing the oral information of ivory and slave traders.

Tamed elephants and copper and gold were probably their objects of traffic too. I cannot conceive what his mountains of the moon were if he did not call the high semicircular watershed by that name. It is only about 6,000 (6,650) feet high, and had he conceived it to be of a crescentic shape, he would not have given the mountains the shape of cocked hats.

Mounts Venia and Kilimanjaro are said to have snow, though no one has reached it, but they are so very far from the sources, and have no connection whatever with the Nile—*they* could never have been meant by informants who put the springs correctly.

Does Ptolemy speak of snow at all? Is melting snow not the idea of later writers. Arrowsmith dashed in 200 miles at the N.W. end of Lake Nyassa which no one ever saw or ever will see; but the ancients, while pretty free with elephants, castles, fishes, anthropophagi, struthiophagi, &c., would never move Venia and Kilimanjaro eighty or a hundred miles to make lunar mountains of them Is there any astronomical reason for calling the highland in 12° south by the moon's name. I fear that none but a lunatic will now divine the reason which led to the name. I have no wish to hurt

the feelings of Speke's friends, but his work is now part of the history of this region; and Ptolemy, in his small Lake "colve," gives a much more truthful view of the size of Victoria Nyanza than Speke and Grant. It contains but little water, except in the northern portion, and enormous patches of aquatic vegetation capable of being walked over are spread between the numerous islands.

Tanganyika would be the same were it not for the currents through it. Three lakes and a large arm are, by Speke, run into one huge Victoria Nyanza. When Speke discovered it in 1858 he at once felt sure that it was the source of the Nile, and he would allow no one to question his conclusion. He then gave the best example I know of the eager pursuit of a foregone conclusion; and, as he would not allow anyone to doubt its correctness, neither would he permit his own mind even to admit a possible flaw, though he saw that the little river that comes out of his Nyanza would not account for the Nile.

He conjectured a backwater rather, whatever that may mean, and Baker upheld Speke's conclusion evidently because he had nothing better to show as a source. The sources, springs, or fountains are from 500 to 700 miles higher up the great Nile valley than either of those gentlemen believed them to be. I am certain of this. I feel a difficulty in the way of putting it now that poor Speke is no longer among us. If I said nothing about him, it would be an offence with some; if I say what I really think, it would be an offence to others. Grant needs no pity,—the sources led to his getting a wife—£2,000 a year and a London house with her, though he never saw them. Baker made as much by his Nile sources as they deserved. After what he did no one will doubt his pluck. A Dutch lady, whom I never saw, and of whom I know nothing, save the scraps in the newspapers, moves my sympathy more than any others. By her wise foresight in providing a steamer, and pushing on up the river after the severest domestic affliction,—the loss of her two aunts —till after she was assured by Speke and Grant that they had already discovered in Victoria Nyanza the sources she sought, she proved herself a genuine explorer, and then trying to go south-west on land. Had they not, honestly enough of course, given her their mistaken views, she must inevitably, by boat or on land, have reached the head waters of the Nile. I cannot conceive of her stopping short of Bangweolo. She showed such indomitable pluck, she must be a descendant of Van Tromp, who swept the English Channel till killed by our Blake, and whose tomb every Englishman who goes to Holland is sure to visit.

We great he-beasts say "exploration was not becoming her sex." Well, considering that at least 1,600 years have elapsed since Ptolemy's informants reached this region, and kings, emperors, and all the great men of antiquity longed in vain to know the "fountains," exploration does not seem to have become the other sex

either. She came much further up than the two centurions sent by Nero Cæsar.

I have to go down and see where the two arms unite—the lost city Meröe ought to be there—then get back to Ujiji to get a supply of goods which I ordered from Zanzibar, turn bankrupt after I secure them, and let my creditors catch me if they can, as I finish up by going round outside and south of all the sources so that I may be sure no one will "cut me out," and say he found other sources south of mine. This is one reason for my concluding trip; another is to visit the underground houses in stone, and the copper mines of Katanga, which have been worked for ages—malachite. I have still a seriously long task before me. My letters have been delayed inexplicably, so I don't know my affairs. If I have salary I don't know it, though the *Daily Telegraph* abused me for receiving it when I had none. Of this alone I am sure my friends will all wish me to make a complete work of it before I leave, and in their wish I join; and it is better to join now than do it in vain afterwards.

The cannibal or Maguema country is densely peopled by a rather degraded race; each town has an independent headman, and there is no cohesion politically; they build square houses, the walls entirely of clay. The women plait their long hair into straw-hat shapes, the brim, coming out three or four inches, is a shade to the eyes—otherwise they are frightfully naked. Poisoned arrows and spears are universally used. Food very abundant. Goats cheap, fowls in villages, and buffaloes and elephants swarming up in the gigantic forests. Holcus sarghum, maize, sweet potatoes, and cassava yield plenty of farinaceous food, and plantains, bananas, and sugar-cane dainties. The ground-nuts, the palm-oil, and the fat-yielding trees are in parts abundant. If they are cannibals they are so causelessly. When asked, they laugh good-naturedly, and say, "Yes, we eat men;" and if they see the inquirer to be credulous, enter into particulars, but laugh so one can see they are joking.

A black stuff smeared on the cheeks is a sign of mourning; they told one of my people that it was animal charcoal made of the bones of relatives they had eaten. As they saw him shocked, they proceeded in their usual way to show him the skull of a recent victim, and he pointed it out to me in triumph. It was the skull of a gorilla, here called "Soko," and this and serpents they admit seriously they do eat. The Suaheli Arabs believe firmly that the Manyuema, or, as they say, Manyema, are cannibals, and they have even taken vengeance on villages supposed to have eaten their attendants. I have not had evidence sufficient to convince any reasonable man that they do not partake of human flesh. Intelligent men among them point away W.N.W. to real cannibals; these may be Du Chaillu's Fans. At present I class Manyema with the people who have no knowledge of fire or of the Supreme Being, or with those who have no language, but possess tails.

May, 1870.—I have read this over again, and fear that I must

alter my tone. The rainy season began as I went north to catch the Lualaba there. The vegetation is excessively rank. Through the grass—if grass that can be called which is more than half an inch in diameter in the stalk, and from ten to twelve feet high—nothing but elephants can walk. The leaves, armed with small spikes, rub disagreeably on the side of the face where the gun is held, and the other hand becomes sore with hours of fending them off. In rain or in morning dew this mammoth grass is loaded with moisture, and as you worm your way along elephants' walks get wetted to the bone.

Between each district a broad belt of primeval forest stands. Into it the sun, though vertical, can send but few rays; the rain-water stands in holes, made by the elephants' feet, for months; and the dead leaves decay on the damp soil, and make the water of the numerous rills and rivulets of the colour of a strong infusion of tea. One feels himself the veriest pigmy before the giant trees of the forest; the roots across the path stand out of the soil, and keep you perpetually looking down; and a good shot-gun does no harm to parrots and guinea fowl on their tops. The climbing plants from the size of whipcord to that of a man-of-war's hawsers, keep you in the only passable path. I have heard gorillas growl close by without getting a sight of them. The country is inexpressibly beautiful; mountain and valley clothed in a mantle of different shades of green; the valleys are deeply undulating in surface. Innumerable dells have to be crossed, and in these the mud, mire, or "glauw" (Scotticé) is awful. Mud, constant wettings, and bad water told on us all by choleraic symptoms and great emaciation. A friend gave me a piece of opium, but it had no effect, but boiling the water I used was beneficial. I began to fear that further exposure in the rains would lay me up as at Liembe and in Marunga, so I encamped in the beginning of February, and must shorten my work or die.

It is certain that no water runs up the south side of the watershed, but I wished only to go round and be certain. The underground excavations were a great attraction, but I must leave them, and possibly some remains of the lost city of Meröe may appear where the Lualaba and the lower Tanganyika join, and give a clue to the origin of these wonderful subterranean dwellings. A burrowing race seems to have spread widely in Africa at a very early period, but no one can say anything like writing exists;—they are like the Bushman caves.

This is a new field for the Suaheli, or Arabs with two-thirds African blood in them. We met a party, two days east of Mœnekus, carrying 18,000 pounds weight of ivory by four relays, *i.e.*, they were travelling the whole distance loaded four times over. News of cheap ivory brought a horde, numbering about 600 muskets, from Ujiji after us. A tusk is bought for a few thick copper rings got at Katanga. I travelled with a trader who had secured 10,500 lb. of copper there. It is run into large bars shaped like the capital letter I, of 60 or 70 lb. each.

Elephants are very numerous, and are killed by large traps, and nothing is done with the tusks except to make blowing horns or armlets.

The people on the left bank of the great river, when signalized by smoke, come over and hold markets to sell salt, pigs, ivory, and flour.

The Manyema never travel, and it was so of old. They know nothing beyond their own districts. They have implicit faith in their large spears and wooden shields. The men are tall, strapping fellows, with faces like those of the better class of Jews;—no prognathous jaws, lark—heels or barn-door mouths appear, as in the West Coast. The country is in many directions densely peopled. They may be cannibals, but not openly so. A finger wrapped up in a leaf as a charm is all that I have seen, and the man who showed it got five cowries, say five shillings, for the sight. If I had believed a tenth part of their men-eating propensities from Arabs and adjacent tribes, I could scarcely have ventured among them. Fortunately, my mother never frightened me in infancy with "Bogie," and I am not subject to paroxysms of Bogiephobia, in which the patient believes everything horrible if imputed to the possessor of a black skin. The mothers of the Jamaica planters have a good deal to answer for. I went back south-west seven days to the camp of the headman of the horde referred to, and have laid by since; the four headmen are as kind and civil as I could wish. Rest, boiled water, and a few species of potato have restored me. We have had 54—58 inches of rain this season, and it does not stop. We are in 4° 4′ S. of latitude. The clouds would not admit of observations being made even if travelling.

Although the drainage is clear to me now it was long ere I could master it. I had to feel every step of the way, and was generally groping in the dark, for who cared where the rivers ran. Forwards, backwards, sideways, formed a route I shall never attempt to put all down. It is no wonder that the Portuguese, which were simply slaving expeditions, did not know the ground over which they trod; for I inquired and plagued by questions till I was ashamed; and I went much further, and traversed more surface than any of them before light shone on the ancient problem. They asked for slaves and ivory, and heard of nothing else; plagued all the headmen of the country to catch their fugitive slaves, and retired without knowing the country in which they had been.

I am quite tired of exploration now. I would not go six days out of my route to discover the lake, or say the broadest part, for it is all lake together, formed by the Lualaba; and if I see where this great river joins the lower Tanganyika, will retire; and I beg the kind Hand which has protected me hitherto to lead me safely home.

Lualaba is 400 feet lower than the upper Tanganyika, so there must be a fall between it and Baker's water. My loving salutation to all at the Observatory.

Affectionately yours,

DAVID LIVINGSTONE.

The Lady Hesperantha.

The Lady Hesperantha was beautiful, but blue—deeply, darkly, beautifully blue. By "blue," I do not mean to insinuate that she had the ghost of a resemblance to the Blue Spectre of woman's rights; what I wish to convey is, that for a young lady, a beautiful young lady, a rich young lady, the Lady Hesperantha was uncommonly fond of reading, writing, and arithmetic. At school she had squared the circle of the sciences—chemistry, physics, astronomy, botany, geology, zoology, palæontology. She had run—she had danced—through the whole set. In languages she had French, German, Italian, Latin, as a matter of course, on the tip of her dainty little tongue, and, what is more, she knew them so well that rather than introduce stale scraps of them into her conversation and correspondence, I believe she would have preferred not to have spoken with a tongue for the rest of her natural life. Indeed, such an accomplished linguist was she, that she actually knew how to speak and write the English language with propriety—than which, I am persuaded, after much observation, there is hardly a rarer accomplishment to be met with. Music and drawing may be said to have come to her by nature (as reading and writing did to "neighbour Seacole"); for what young lady, who *is* a young lady, does not paint and play? For the rest, she had gone through all the English and foreign classics, and acquired, along with the useful and practical information which such studies never fail to afford, a taste for type, for reading everything printed, which nothing printed, apparently, could satiate. Indeed, nothing in the shape of a book came amiss to her, from Hook's "Lives of the Archbishops of Canterbury," to Mr. Burnand's latest "Happy Thoughts." She was equally at home with Jeremy Bentham or Jeremy Taylor. Her favourite rambles, however, along the star-strewn path, "the milky-way" of literature, led her among the brilliant galaxy of our present day writers, Carlyle, Herbert Spencer, Newman, (J. H.), Huxley, Ruskin, Mill, Froude, Lewes, (G. H.), Browning, Darwin, Emerson, Tyndall, Lawrence Oliphant. Each bright particular star, enshrined in the shelves of the South African Public Library, she visited in turn; but the committee of that admirable institution were ultimately unable to cope with the extravagance of her bibliomaniacal tendencies; and she at last came to an open rupture with the politest of men, the assistant librarian, because he could not supply her with the fourth edition of Matthew Arnold's "Literature and Dogma."

"For all this came a ruin." A surfeit of type, like a surfeit of any less divine food, has its pains and penalties, and one day the Lady Hesperantha, in prosecuting her studies into the recondite literature

of box-lining, came, for her sins, upon the following fragment. As much of which as is coherent I subjoin :—

"THE UNIVERSAL PLANT.

"'We have the receipt of fern seed, we walk invisible.'—*Shakspeare.*

"May we not claim to have discovered, once for all, the link which "interknits the animal and vegetable kingdoms, and so rendered "Häeckel's 'Debatable Land' no longer tenable? The simplest "application to the subject of the Law of Descent with Modification, "shows unmistakably that we have a lineal and verifiable off-shoot of "the tree of the knowledge of good and evil, growing broadcast on our "planet at this moment, and combining unquestionable animal and "vegetable characteristics, in a high degree of development. Wherever "the foot of man treads it seems to spring into life, like a witness sub-"pœnaed in the pending cause of spontaneous generation. And to "what an infinite variety of ends has it not been used in the history of "mankind! Its habitat is cosmopolitan. It is equally acclimatized "at the equator or the frigid zone, and grows as readily on Cape "Palmas as on Desolation Island. At present, like *Sequoia gigantea*, "it flourishes most luxuriantly in North America, and attains its most "gigantic proportions in the Botanical Gardens of New York City. "It usually courts the shady side of large public institutions, and, as it "thrives on a saline atmosphere, it is, in all countries, especially abun-"dant near custom houses on the sea-shore. At general elections "people are fond of wearing its blossoms in their button-holes, and the "variegated rosettes, so lavishly displayed on those occasions, are "generally artificial imitations of its flowers."

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Here the fragment ended abruptly, with the exigencies of the box-liner.

The Lady Hesperantha was puzzled. I can't say whether she scratched her beautiful head, but I can say that she took incontinently to the study of botany, and that her school-girl acquaintance—respectful and distant—with that seductive science, now grew up, like Jonah's gourd, in an incredibly short space of time, into the most easy and intimate familiarity. From Tournefort to Schweinfurth, she cropt the heads of the whole "verdant brotherhood" close, breaking neither her heart nor her "lower mandible," on their gnarled and knotted syllables. The nut of the mystery, however, was not cracked: She closed the XXII vol. of De Candolle's "Prodromus" with a sigh, but without success.

Hooker, she observed, dated from Kew. "Perhaps," she thought, "he could afford me a cue." But he could not; nor could Bentham either.

Then she took up Göethe's "Metamorphoses of Plants," and for some time thought she was "burning," but the magic of his music

soon died away, and she soon cooled down, when she found that all his pleasant paths merely led up to the latest conclusions of modern science.

At this time she rushed ardently from theory into practice; surreptitiously purloined Thunberg from an institution—that shall be nameless—and, book in hand, explored every nook and cranny in Table Mountain—in vain.

She went up to the top of the Lion's head on the same errand, and what is more, she came down again—in vain.

"Perhaps it is the rum shrub (*Fumus Capensis*)." But she dismissed the base thought as a stale heel-tap from *Punch*.

"Perhaps it is tobacco! which? *N. Tabacum*, *persica*, *rustica*, *repanda*, *latisima?*" She could not decide; and that idea ended likewise in smoke.

"Perhaps it is only a *flower of rhetoric*," she said; and "Flos regni Arethusae," suggested itself, but the novel idea brought no comfort.

What, what, could it be, this Universal Plant? Was it a Cryptogam, a Phænogam, an Angiosperm, a Gymnosperm, or was it a something to be locked up in the lining of that fatal box for ever?"

"The custom-house records," she pondered, "show imports from and exports to every quarter of the globe. I will refer to them." But she was stopped by the reflection, that no information can be obtained in that quarter unless a specimen is deposited for "revenue purposes."

The three branches of Her Majesty's service selected this special juncture as the most conspicuous moment in which to declare their connubial aspirations. She listened with impatience, and decided to make a knowledge of the Universal Plant a crucial test of matrimonial qualification, and to "pluck" and reject all candidates for her hand who were unable to spot it.

In the competitive examination which followed thereupon, the army was represented by the most dark and dangerous pair of whiskers in the service.

The navy, by as wakeful an eye as ever winked behind a binocular.

And the civil service by the clerk who owed the longest tailor's bill. (Could there be a more touching appeal to the feelings of a rich and beautiful woman?)

The three united services popt their questions in the stereotyped formula which we all adopt on these interesting occasions; and the Lady Hesperantha, in return, popt hers. "What is the Universal Plant?" said she.

The army thought it was a Dicotyledon. *Phæolus multiflorus*. The scarlet runner.

He got beans for an answer.

The navy thought it was a Monocotyledon. *Scilla nutans*. The blue bell.

He was referred to the boatswain, to know "How many bells."

The civil service hesitated; an Endogen? *Asparagus capensis?* The *Wacht een beetje?*

He was told to tell that to his tailor.

It is unnecessary to specify in detail the results of such an unique competitive examination. The three *branches* of Her Majesty's service were ruthlessly *pruned.* They went back sadder, if not wiser, men to the onerous duties of their respective professions; and left the Lady Hesperantha to the consoling reflection, that though they had all gone, yet the solution to the problem had not come.

It was the witching hour of eve:—

> "The sun upon the lake is low,
> The wild birds hush their song."

The Lady Hesperantha sat pensively in her chamber, a single floret of *Schizostylus coccinea* in her hair, ruminating, ruminating the vexatious vegetable arcanum. Mechanically her hand took up the book that lay nearest. It was not a cookery book. It was the "Lay of the last Minstrel," and opened of its own sweet will at the well known *seance* scene between the Lady Margaret, the Spirit of the Flood, and the Spirit of the Fell. The Lady Hesperantha let her eye wander over the page.

That evening she took a resolution, and next morning a first-class ticket by the train leaving Wynberg for Cape Town at 9·30 a.m.

The train rushed on in rapid perturbation; but the Lady Hesperantha sat still, absorbed in the coils of her fascinating enigma. *It* stopped panting at each intervening station, but *she* never stopped thinking on the one engrossing topic. Could it by any manner of means be the railway *plant?* She discarded the idea as fit only for the dreams of the sloth *sleepers.*

Of course the three pruned branches of Her Majesty's Service were at the Cape Town terminus to receive her, and equally of course she did not expect and therefore did not see them.

The Army brought its "eyes right;"

The Navy (always up to time) took hold of its forelock;

And *the Service, par excellence,* made the beautifulest low bow that has been seen in the civilized world since the demise of the lamented Sir C. Grandison.

The table cloth was laid upon Table Mountain. The god Eolus was letting off all Mr. Carlyle's windbags together. The handsomest of all Mr. Gordon Murison's many hansom cabs drove up and offered his polite and reasonable services.

The Lady Hesperantha walked on.

Stuttaford's shop windows offered a degree of attractive novelties which no well-regulated female mind ought to have withstood.

The Lady Hesperantha walked on.

The sun was wasting its magic might on diamonds, pearls, and gold in Mr. Burmester's resplendent window.

The Lady Hesperantha walked on. She was beyond rubies.

The deadly snares to catch the unfledged civil servant, which Mr. Bruce so heartlessly displays, appealed touchingly to all the softest feelings of her tender womanhood.

The Lady Hesperantha walked on.

A dark handsome man, in the neighbourhood of Hodgson & Co.'s lordly establishment, asked audibly if the *Transit of Venus* were then taking place, and went in to consult the almanack.

The Lady Hesperantha walked on.

The Telegraph Office suggested, to a great mistress of slang, the inresistible notion of "wiring in."

The Lady Hesperantha walked on.

A large balance was waiting her orders at the Cape of Good Hope Bank.

The Lady Hesperantha walked on.

She rounded the Orphan's corner safely. She entered Wale-street. In Mr. Juta's window was the last number of the *Cape Monthly Magazine*, and in it was an article written by herself.

The Lady Hesperantha shut her eyes and her teeth, and walked on.

On, on; past St. George's Cathedral, where the columns of the portico were listening attentively to matins, apparently intoned for their exclusive benefit, somewhere in the remote back ground—round the corner of the iron railing—into New-street. On, on, deliberately, step by step, went the Lady Hesperantha, until finally, screwing her courage to the sticking point for a supreme effort, she paused with dreadful resolution at the door of the Progressive Library and Spiritualistic Institution, New-street.

The Dental Hall of Eblis.

I am as daring a man as any contributor to the *Cape Monthly Magazine*, but I am free to confess that I would not attempt to cross that mystical threshold in plain prose,—no, not for Joseph, nor all the corn in Egypt.

> A haunting music, sole perhaps and lone
> Supportress of the fairy roof, made moan
> Throughout, as fearful the whole charm might fade.

* * * * * *

"Tap! Tap! Tap!" "What does 'Tap' mean?" asked the incorrigible Lady Hesperantha. "A Tap," replied the presiding Psalmanazar; "A Tap, Madam, invariably denotes the presence of spirits. I need not assure you that we only deal with those of the best quality. "The spirit circle is squared," he added. "Orders, Ladies and Gentlemen, Orders!"

These, as may be supposed, were of a somewhat heterogeneous character. The Lady Hesperantha having come first was, of course, served last. Tremblingly did she take the mysterious fragment of the box-liner from her reticule; but she had got no further than the

opening words "Universal Plant," when, hey presto cockalorum! out of the pitchy darkness came an illuminated policeman's baton, No. XIV., and in unmistakable gothic characters, of blue and silver flame, tastefully shaded, deliberately inscribed upon the wall,

SAUER KRAUT.

The Lady Hesperantha became unconscious—well she might!

* * * * * *

At 11·15 a.m., as is my wont (and I mention this in order that any reader who wishes to identify me may do so), I was passing up New-street on my way to the Public Library, when, to my unspeakable astonishment, I recognized in the lady who at that moment left the door (the small one) of the Progressive Library and Spiritualistic Institute, my learned and beautiful young friend, the Lady Hesperantha. As I have known her since she was six years old—and we are on the best possible terms (she regards me as an amiable old fossil)—I expressed point blank my consternation at meeting her under such unlooked for circumstances. "Come to the Library," said she, "and I will tell you all about it." And to the Library we went; and in the last compartment, on the right hand side, just before you enter the sub-library of Sir George Grey, surrounded by my favourite "Verdant Brotherhood," in every variety of size and binding, the Lady Hesperantha confided to me the tantalizing, the perplexing, the ridiculous mystery of the "Universal Plant," as has herein been set forth.

I said at the outset the Lady Hesperantha was blue. She was; but Prussian blue was not precisely the shade which she affected; and even the response pronounced by the probably toothless spirits in the Hall of Eblis afforded no repose to her inquiring mind, in fact its effect was just the contrary. "Sauer kraut (*Brassica oleracea*) may become ubiquitous some day," she said dejectedly, "and the *Challenger* seems to have found it under *Pringlea Antiscorbutica*, on Desolation Island, but it is not universal yet." And again her thoughts went climbing among the branches of the mysterious vegetable, which really could hardly have exercised greater fascination had it been the forbidden fruit (*citrus medica?*) itself.

"My dear young lady," I said soothingly, "ever so many years ago I recollect, on an auspicious occasion, making you a gift of the 'Arabian Nights,' in the hope, I confess, that it might stimulate you, one day, to study in the unique beauty of the unrivalled Arabic tongue those tales, which even after translation have still so many powers to charm. Probably you may still be able to recall some of the numerous instances that work affords of the ingenuity with which the Orientals solve the abstrusest riddles. Suppose we put this reputed ingenuity to a practical test here, at this moment, in Cape Town instead of in Cairo or Bagdad a thousand years ago? To your sensitive mind, I am sure, any plausible solution of this puzzle would

be preferable to 'Sauer kraut.' Suppose, then, we submit the question to my ingenious friend, Hadje Abdullah of the New Market, Caledon-square, green-grocer?"

With some reluctance she consented; and we walked down the Government Gardens together. At the top of Adderley-street, as usual, we found the Civil Service brigaded, and a grand field-day of pipes and bags going forward. Why will not these admirable men "tak a thought" and combine the duality of pipe and bag, now two discordant parts, into one harmonious whole and perform upon it, simultaneously, for their own benefit and that of an appreciative public? Has not experience taught them who will pay the piper?

I merely throw out this hint parenthetically, as I pass with my beautiful companion, and secure a four-wheel cab, No. 27, Higgs (I love to be exact in these small matters) which deposits us with dispatch and safety before the northern aspect of the New Market Building, Darling-street, Caledon-square. I hand the Lady Hesperantha out; and we present ourselves incontinently before the stall of my friend Hadje Abdullah, who does not seem to be busier than usual. I nevertheless apologize for disturbing him. "Say not so," says he, in the purest Arabic; "beauty is always a welcome guest. How can I serve you, Sir?" he adds, in the vulgar vernacular of £ s. d. "Nice turnips, nice cabbages, nice cauliflowers?" I explain briefly to him in the language of the Prophet, in deliberate preference to that of "profit," that our visit has reference to a more recondite vegetable than any his stall is likely to contain; and I hand to him for inspection the fragmentary diagnosis of the Universal Plant, so often alluded to. He glances over it contemptuously. "Is this all?" he asks. "Why it is quite an Oriental Joe Miller; Cid Hammet Benengeli's last. Fatima, bring the Klapper Olie." This last is addressed in the tongue which is commonly called "Kombuis Hollands" to an uncommonly handsome Malay woman who hands him a small flask of cocoanut oil. He pours a drop in the hollow of his hand, and extends it for the Lady Hesperantha's inspection. In breathless trepidation she bends her beautiful head over his bare black paw, and there reads, intertwined with the life lines and sinuosities of the hand, in the most crabbed and shaky Arabic characters conceivable, these simple words:

(Palma unctua)

THE GREASY PALM!

In the Amaswazi Country.

Must there not be living numbers of young men in full possession of health and strength who, while reclining on a well padded lounging chair inhaling the fragrant perfumes of a shilling cigar, have felt their hearts beat with sympathetic bound to the thrilling and veracious (?) adventures of Jules Gerrard, Gordon Cumming, Du Chaillu, Stanley and Baker; the deeply interesting narratives of Livingstone, Baines, Speke, Chapman, Baldwin and Andersson; and the wild and startling beauty of Captain Butler and Frederick Boyle?--felt them thrill till they almost burst their narrow boundaries as they wildly stride to and fro on the soft velvet carpet of their breakfast rooms, muttering "And why should not I, too, see the wild beauties of nature in all their virgin glories, and engage the monarchs of the wastes in their native fastnesses?" To such I say, "Do so. Throw aside the gorgeous dressing gown and be-tassled smoking cap, consign to oblivion the embroidered slippers, discard the lounging chair, and give away the cigars. Buy guns, walking boots, flannel shirts, and leather gaiters; invest in the 'harmless, necessary pipe,' and plenty of good, honest tobacco; get a sextant, chronometer, and other instruments; then away over the broad ocean to Africa, America, Asia, Australia,—anywhere. Exchange the smoke-laden haze of club rooms and the heated atmosphere of ball rooms for the laughing gas of the prairies, the toothsome luxuries of the dinner table for the hard but wholesome fare of the desert. Add toughness to the muscles, vitality to the lungs, knowledge to mankind, and lustre to your name; then after years of wandering return again to enjoy with renewed appetite the almost forgotton luxuries of former days, and to recount to admiring circles the moving accidents by flood and field, which will crowd up in the memory, jostling each other as the never ceasing rolling of the ocean billows." To such a consummation as this every line that is written *apropos* is as a stone which leads nearer and nearer to the crowning point of an edifice; and therefore to such an end my unaccustomed pen may, without presumption, lend assistance.

Let the curtain rise. The dull grey of a breaking morn pervades the scene. Faint streaks of amber light struggle with the opposing gloom. The gray-blue moon "'gins to pale his ineffectual fire," and here and there a star faintly glimmers, like the light of a far distant vessel slowly travelling over the wild waste of intervening waters. It is vain yet to attempt to see much of the surroundings. The glowing embers of some large fires throw up a shimmering haze, and cast a reddish glare on the snowy surfaces of a couple of bell tents, around which ghost-like trees spread their feathery arms into the semi-darkness. Wait half-an-hour and look again. It is now nearly broad daylight, the stars have entirely disappeared, and the moon is but as faintly visible as the soft and pure half-blush of virgin

innocence; while rays of ruby and gold glint in widening circles from a common centre, and prodigally give to the wet and dewy leaves a portion of their coloured glory. A slight tinge of white frost is seen on the long dry grass, and the air is sharp and bracing.

The tents are surrounded by a strong thorn fence, within which is also a large fire at which the major-domo, Sam, a coolie, is busy making coffee. Round the fire are scattered pots, pans, kettles, gridirons, plates, cups, buckets, and all the paraphernalia of a standing camp; and on the branches of a tree within the enclosure hang eatables of all sorts. No starving here. Buffalo tongues, an eland's rump, a whole impala large as a sheep, half a wild pig, an elephant's trunk, a couple of giraffe shinbones, three guinea-fowls, a pauw, four or five "barbels" (fish) nearly a yard long, and some strips of fat from the side of an hippopotamus. Ten yards off is another enclosure, in which is a long lean-to shed, under which live our forty Kafirs. They are all up now, and are laughing, shouting, and gesticulating as they cook their meat at the row of enormous fires in front of the shed. The trees in the enclosure are laden with lumps of meat of every conceivable shape and size. Everyone takes what he likes, and cooks it as he prefers. Some boil it in large iron pots, some throw it in the ashes, and others roast it on a stick; but all eat as much as would satisfy four or five white men. Their plain meal finished, they grease down their nude and sable bodies, and are ready for the day's work. On the ground outside the enclosure are seen skins of all sorts spread out and pegged tight down, while scattered about are the thick and powerful horns of the buffalo, noble twisted Koodoo horns, handsome waterbuck horns, the graceful gemsbok horn, two or three pairs of elephant's tusks, some rhinoceros horns, hippopotami skin and tusks, as well as blue wildebeests, eland, roan antelope, impala, inyala, and other horns, and a couple of lion skins, and several hyena ditto; and on the trees are several preserved heads of bucks hung up to dry. No greenhorns here evidently.

We emerge from the tents clad in cord breeches, leather gaiters, flannel shirts, and *veldschoens*, yawn and stretch ourselves, and then leisurely imbibe a cup of hot coffee slightly laced with rum. Here let me enter my voice against the total abstinence principle which is recommended by some travellers to be practised while travelling and hunting. I have had several year's experience in African travelling, and have tried both systems, and have come to the conclusion that two or three glasses of spirits a day are decidedly beneficial, especially if one is in the habit of wine-drinking when at home.

Well, the coffee finished, we give orders to Sam about breakfast, and then seizing a towel and a gun, walk to the river (the Umkomati) for a dip. A beautiful river. As we emerge from the overhanging canopy of trees which crowns the bank the view is enchanting. The river is about 250 yards across. Both banks are lined with green trees glowing in the early sunbeams, many of which are already covered with golden and pink and white flowers, which

mingle their grateful fragrance with the bracing morning breath, and here and there patches of tall and graceful reeds bend softly to and fro in obedience to the restless currents of air. Above us the river is deep and sluggish, and as we approach several huge black, hoary-looking heads are suddenly drawn beneath its surface, as the startled hippopotami seek safety in its depths; while higher up, with a sound as of a locomotive letting off steam, others throw up clouds of silvery spray, and sportively chase one another in their uncouth gambols. Dark-blue swallows skim along the surface, rising and falling in sweeping curves in search of their morning meal; and a large kingfisher, gaudily decked in sky-blue and green and gold, poises himself in mid air ere with the suddenness of a thunderbolt he swoops on to the unsuspecting fish. Through the trees on the opposite side are a couple of sassabyes quietly cropping the young grass, their dark chocolate coats all aglow with the rising sun, standing out with startling vividness against the brilliant green of the newly sprung herbage. Below us the river widens and is broken up by enormous basalt boulders worn white and smooth by the passing waters, and by small wooded islets, through and among which the rushing water tears its headlong way, bubbling and sparkling, and beating itself into white and frothy foam in its mad scramble to reach the sea. Lower still a white bank of spray, on which dancing sunbeams dazzle the eye, shows the *locale* of the fall whose sullen though musical roar is so fit an accompaniment to the scene. In the far distance is a range of mountains but dimly seen through the blueish haze, whose tops are clothed with the risen mists, painted into snowy whiteness by the magic brush of the sun's all-powerful rays.

There are too many alligators about to allow of a swim in the deep water, but in the clear and sparkling rapids a dip may safely be indulged in. What a glorious sensation as the limpid water courses rapidly over the body, stringing up the nerves, clearing the head, and giving energy to the system! As we stand on the water-worn rocks rubbing ourselves down with rough towels we sing and shout aloud in the very gleefulness of excessive animal vitality, and as we go back to the camp almost scorn the ground we tread on, and chase each other like released school-boys. And what an appetite! Surely the three of us can never eat that pile of eland steak and buffalo tongue that Sam has cooked! Can we not indeed, and sundry enormous slices of buttered toast as well, washed down with hot and fragrant coffee! After breakfast we smoke a quiet pipe, and discuss the directions we shall take for the day's shooting. The pipe done, we fill our pocket pistols with weak brandy and water, take our guns, and each calling five or six Kafirs, start off in different directions. For my own part I choose the direction of the mountains, and lead the way, a Kafir behind me carrying a spare gun, the rest following in single file. On we go at a steady march, keeping ears and eyes on the alert, and ever and again throwing a

look round on the ground for fresh slot. The tall grass is wet with the night's dew and soon saturates my boots, but they will be dry again before midday. Little scrubs a foot high covered with villainous fish-hook thorns impede our progress a good deal, pulling one up to a dead stop if one walks into them, and penetrating even my leather gaiters. How the Kafirs manage with their bare legs I cannot make out. Thorns of all shapes and sizes, thorns long and thin—even a foot long—thorns short and thick—some as broad as they are long—thorns straight, thorns turned back, thorns curly, thorns single, thorns double, thorns treble, thorns on everything,—on trees, on bushes, on underwood, on scrub, on creepers,—even the very grass has spikes. A rare country for tailors! On through the vast expanses of flat-topped mimosa trees already beginning to show the little balls of fragrant gold with which they will soon be covered. Birds so gorgeously clothed as to look like chips from a rainbow dart from tree to tree uttering unmusical "tweet-tweet's" as they fly; the iridescent green and purple of the honeysucker, brilliant as a jewelled star, dazzles the eye for a moment and is lost to sight in the bush; the bee-finder settles on a tree in front of us and calls us to follow him, but we have sterner work to do; soft coloured doves dart at lightning speed among the trees, and richly painted butterflies flout about and hover in bashful dalliance over the scented flowers ere, lightly settling, they bestow one soft kiss and flutter away to yet another love.

Hist! Crackling branches tell of the vicinity of something larger. Ah! there they go, and a troop of about fifty impalas passes at full gallop within a hundred yards. Instinctively the gun goes to the shoulder—but no, let them go, we do not want meat, and they are good for nothing else. While the Kaffirs stare in astonishment at my not shooting, just watch them tearing past following each other like sheep, all jumping at the same place though there be nothing to jump over. How smooth and glossy their light reddish skins, glistening in the sun as though they were oiled! How graceful their large though light ears standing forward in eager fright! How wild and brilliant their huge eyes! How light and springy though strong their pace, and how the disproportionately large horns of the males rear themselves above the heads of the troop, rising and falling till they are lost to view in the underwood! Let them go, it is but poor sport killing them; and they have many enemies. Lions are their sworn foes, and follow them wherever they go; and leopards, wolves, and jackals help to thin their ranks.

So on again through groves of dark green shining trees, covered with bright golden globes larger than the largest orange. Is your mouth dry? follow the advice contained in the Kafir name of the tree, "Sit down a bit;" choose one not too orange in colour; the skin is too hard to cut, break it on a stone and inside will be found several large flat seeds imbedded in a light-brownish pulp or squash. Taste the pulp, it is of a "sweet acid" taste, and is exceedingly

pleasant when not too ripe. The country has been burnt off here, and the new grass is already two or three inches high, and of a most vivid colour. Sure to be game here. Ah! there, far down through the brown tree trunks,—there in the little open glade. What is it? A troop of blue wildebeestes and Zebras. I must have one of these, so I tell the Kafirs to squat down and keep out of sight while I advance *ventre à terre*. It is unpleasant work: the tufts of stubble where the old grass is burnt off are not pleasant to creep on, and every now and again a thorn enters the knee or hand. Never mind, only a little nearer. Now! they are within one hundred yards, and still quite ignorant of the vicinity of a foe. What shall it be; an awkward looking zebra with his gaudy striped coat, or a wildebeeste with his dark ashy blue? Ah! there is a tremendous fellow, big as a buffalo. Softly rises the gun to the shoulder—crack! and a two-ounce bullet whistles its way straight to the lungs. One rush forward, and he falls helpless on the turf; one vain effort to rise, one agonized struggle, a spasmodic working of the limbs, and with a gurgling sigh the poor wretch lays his head on the ground and bids an eternal farewell to the earth he had deemed so fair. Up like lightning, and let them have the second barrel. Thud!—the bullet strikes, but I can see it is only a body-shot which will do no harm, and from which the animal will soon recover. The Kafirs come up, and we approach the dead wildebeeste. What a picture for a hunter's eye! The ash-blue of his coat is backed by the rich green of the young grass, and set off by the crimson blood which oozes from his shoulder and nostrils, and all is lighted up by the now high sun into an almost dazzling combination of colour.

I take a rest here, and, sitting on the wildebeeste, indulge in a sip from the flask. It is not yet nearly midday, so I leave a couple of Kafirs to carry the meat and skin to the camp, and then march on again. We leave the young green grass and enter a fresh *brant* where the new ash lies thickly on the ground, and clouds of black dust rise as we plough our way through it. And so on again, through the interminable bush never before profaned by the foot of a white man. Thicker and thicker become the trees, greener and greener the leaves, and a little way ahead a line of date palms, their large light green fan-like leaves gently waving in the breeze, proclaims the presence of a watercourse. As we approach the bush becomes so thick that we have to force our way through; but it does not matter, there are no thorns; for it is a remarkable fact that trees that grow immediately on the banks of a stream possess no thorns, though fifty yards from the bank everything is covered with them. On the top of the bank tall reeds impede our progress, but we work through them and find ourselves about twelve feet above the stream bed; the course is dry, and in the sandy bed we can see the spoor of three or four lions. Scrambling down the bank we find that it is not fresh, so it is of no use looking for them; we therefore walk a little way down the bed to find out by the footprints what

animals have lately crossed. The dwarf palms and reeds almost meet over our heads, and the air is most refreshingly cool. Plenty of game has passed over, but we cannot with certainty pick out any spoor that has been made since sunrise, so we ascend the opposite bank. Out of the reeds and—ah! something is forcing its way through the bush. A rush, a scramble, a shower of sand and pebbles. What is it? A noble koodoo, by the Lord Harry! large as a mule, and with grand horns whose tips tower aloft almost ten feet from the ground. He rushes straight from us, tearing through the bushes, and scattering the sand all around in his mortal panic; but not for long. A sharp crack is heard, white smoke is seen to rise, and a ruthless bullet enters below the root of the tail, and finds its way to the throbbing heart; then, with one spring high into the air and a low, plaintive moan, he falls never more to rise. What a handsome animal it is! Can the most fervid imagination conceive anything more truly grand and noble? Its form, large as it is, is graceful as a greyhound's, though at the same time the chest and quarters denote plenty of strength; the pale blue-grey of its body is set off by ten delicate white lines from backbone to belly; the neck and chest are ornamented with dark, handsome manes, and the fine-cut head with its open nostrils and dark and lustrous eyes is surmounted by a pair of horns like gigantic corkscrews—in my opinion the handsomest of any known buck. Can there be any real pleasure in taking the life of an animal outwardly so calculated to enjoy to the utmost the little span of existence meeted to it, and which has not the advantage of being dangerous to attack? I cannot tell, but I know that as I survey the yet quivering body my heart beats again with exultation, though whence the feeling arises, and what particular sense is gratified, I am unable to say; but away with moralizing, the Kafirs are beginning to skin it—so mote it be.

It is now near midday, and the sun beats down with "double million magnifying" power on our devoted heads, and the perspiration courses down my face in streams, so I take another pull at the flask, light a pipe, and lie down under the spreading branches of a mimosa tree, while the Kafirs are busy skinning the Koodoo, chattering the while like a troop of startled monkeys. As I lie with closed eyes, imagination wafts me from the solitude of the untrodden forest to the home far away over the blue ocean,—the dear old red-brick house deep in a glen among the Surrey Hills, and hidden from view by tall and weather-beaten elms, from which the ancestral rooks were wont to welcome me with noisy "caw-caws;" where the long since pensioned off thirty-year-old pony, on which we all learnt to ride, roams at his free will in a paddock of his own; where was my own cosy sanctum with its guns and rods on racks, its cricket bats and boxing gloves, and the toothless old hound rolled up on the rug before the fire; where the poultry and the geese and the cat—hulloa! I was going to sleep.

As the head is a very fine one, I determined to preserve it, and so

am obliged to leave three Kafirs to carry back the spoil, and go on with the two remaining. The scene changes again. We leave the thick bush and enter more open park-like country ; the trees are larger and further apart, admitting of a view a quarter of a mile round, but the grass is long (thigh high), and walking is a matter of labour. Buffalo droppings are plentiful, but they are two or three days old ; but what is this narrow path, not a couple of feet wide, with the grass beaten flat down ?—an elephants' path, and made this morning, too. They have been travelling north without feeding. Never mind, we may come up with them before night. Our flagging spirits rise, heat is disregarded, and I lead the way along the down-beaten grass at the double though it is very dry and slippery. Hour after hour passes away ; mile after mile of forest is traversed ; buffalos and bucks of two or three varieties are passed, but I do not shoot. The sun gets quite low, and still the elephants are miles ahead. They have evidently been shot at, and are travelling away to the north from the hunters who are camped fifty miles south of us. What is to be done ? The camp is twenty-five miles away, and it is quite plain I cannot get back to it to-night. I have no blankets, and above all there is no water. It cannot be helped, we must camp out somewhere for the night, so are forced to leave the elephants' spoor and search for water. A range of hills two or three miles to the right gives some promise, so we make for it and are rewarded by finding a running stream of crystal water ; so choosing a suitable spot I set the Kafirs at work tearing down branches of trees to make a circular fence as a protection from lions, while I go in search of something to eat. I do not have to go far, for a quarter of an hour's walk along the grassy slopes of the hills brings to view a sassaby quietly feeding in a hollow by himself, and as he has not seen me I have no difficulty in creeping among the bushes till I am within a hundred yards, and then dropping him with a bullet in the shoulder.

The sun is now down, so I cut off a leg and shoulder and return to the Kafirs. They have made a strong enclosure about twelve feet in diameter, and have also collected a pile of firewood and cut a lot of long dry grass for me to lie on. Fresh steak cooked in the ashes, washed down with sparkling water, form my frugal meal. That done, I stretch myself on the soft grass between two fires, with a block of wood for a pillow, and the extended branches of a tree for a canopy, smoke a pipe, and then try to repose myself to sleep. The Kafirs are already curled up close together by one of the fires, and fast asleep ; but the novelty of the situation keeps me awake, and with the soft breeze gently fanning my hair I lie and listen to the whistle of the cricket and the distant chirp of some night bird till they too at length become hushed, and nothing disturbs the solemn stillness of the night but the scarcely audible breathing of the Kafirs, and the occasional crackling of the fires ; then I look up through the branches barely stirred by the

night air, and watch the softly beaming moon and dancing stars. Many well-remembered scenes from my varied experiences chase each other through the brain, focussing half a life-time into half-an-hour,—scenes of college days and cricket matches, trout streams and yellow stubble, Richmond dinners and Continential gaieties, sea voyages and life on the Diamond-fields, African travel and gold-digging, till at last, with the vision of a fair (ah! so fair) face hovering about me, I drop off into the sound sleep which is so well earned by a hard day's work. After some hours I wake. The moon has set, and sombre darkness reigns supreme; the fires have fallen low, and the glowing ashes throw but a weird glimmer on the sleeping forms of the two Kafirs; in the distance is heard the growling of lions, the howling of wolves, and the shrill barking and snarling of jackals as they quarrel over the body of the buck I had killed; nought else disturbs the quiet, so I replenish the fires and lie down again not to wake till morning.

A nipping morning, and the warmth of the fires is very acceptable. While some more steaks are cooking I consider what it would be advisable to do. Shall I take up the elephants' spoor again and continue to follow it, or return to the camp? After some cogitation I decide that, having no blankets, and my friends not knowing but that I had met with an accident or was lost in the bush, it would be better to return, and if inclined come again to the spoor properly provided with blankets, bread, and coffee.

But where is the camp? As I stand on the slope of the hill on which we have made our night's resting-place and look around me nothing is to be seen but a vast expanse of tree tops. As far as the eye can travel nought is visible but a huge sea of green leaves and golden flowers, apparently as flat as Kennington Oval. How is it possible that we can pick our way through such a parthless maze, without beacon of any sort or a compass by which to guide ourselves? We walked more than thirty miles yesterday, and by no means in a straight line, and the camp is now fully twenty-five miles away; but in which direction? Some writers have a good deal to say about the solitude of the praries, and Charles Kingsley, in "Westward, Ho!" said he never knew what real solitude was till he visited the Valley of Rocks, near Lynton, where when I visited it, there stood a large hotel within call! but I do not think that anyone can understand what true, utter solitude really is unless he has thrown his eye, as I did then, over well nigh five thousand square miles of waving tree-tops, unbroken by a single hillock. By what instinct I am able to tell the position of the camp I do not know, for I took not the smallest observation while walking yesterday, still I can point out the exact spot; however, to make assurance doubly sure, I call the Kafirs to give their idea as to its direction, and we all agree upon precisely the same straight line.

Our frugal breakfast finished, I tighten my belt, shoulder my heavy rifle, and we make a start back for the camp, marching at a

good pace, and not taking any particular trouble to keep on the look out, for I do not care to shoot anything so far from home, as it would be almost impossible to carry in any of the spoil. I am therefore at liberty to look about me at the flowers and trees, which while seriously hunting receive but little attention. I recognize many familiar friends. The rich green of the young grass is plentifully flecked with patches of bright blue, which on examination prove to be no other than our old acquaintance, the lobelia; pink, white, and red geraniums are scattered about, and the well-known ivy-leaved climbing geranium chooses many a tree on which to support its fragile arms, as do jasmine, clematis, honeysuckle, and numerous other brilliant-flowered, sweet-scented creepers. Nearly every tree has blossoms, golden coloured predominating, and the air is laden with their grateful fragrance, and hundreds of flowers (mostly scarlet and its shades in colour, and of a bulbous origin) set off the vivid green of the growing sward. Euphorbias of gigantic size, aloes, and several sorts of cactus, are plentiful on the slopes of the hills, and enormous-trunked boobahs are seen here and there, while in the flat are a thousand varieties whose names are to me a hidden mystery, and of which fully one half belong to the mimosa family. Some of these latter grow to a very large size,—larger than the ordinary run of our English oak, but as a rule they do not attain a height of more than thirty-five or forty feet. Wild cotton bushes, looking for all the world like currant bushes, are not uncommon, and their long balls of fleecy snow look very handsome among the glistening leaves. This cotton is long and strong, but is too coarse in texture to be of much use; but it would, I think, make very good blankets. Of fruit there is no edible kind at this season of the year, with the exception of the one I have already described, but in the summer and autumn many varieties are to be met with.

But we must step out. It is hard work pushing our way through the long dry grass in which we again find ourselves. The sun is hot, and my heavy seventeen pound rifle is changed frequently from shoulder to shoulder, and has almost worn holes in my shirt. Not having the excitement of hunting to keep the senses actively alive and the nerves strong, I walk on almost mechanically, and the mind wanders to other scenes in far-off lands, until a sudden and excited shout from the Kafir walking immediately behind me recalls the truant senses, and brings me up to the *qui vive* as the magic word "'tention" does the gossiping ranks. I turn round to see what is the matter, but the Kafirs are running away as hard as they can put foot to ground, and the only notice given to my call is by one of them turning his head while still running, and pointing excitedly to my front, at the same time calling out, "Look! look!" I turn to look, but at first see nothing. Presently, however, I become aware of the presence of four long reddish bodies about forty yards from me, just visible through the tall grass. They have been lying down,

and are in the act of rising. What are they? Impala? impossible, or the Kafirs would not have run away. All at once I become alive to the fact that they are lions, and their low growls become distinctly audible. Whew! a long low whistle gives expression to my feelings. What on earth shall I do? There is no climbable tree within fifty yards, or I should quickly swarm up without asking anyone's leave. Shall I shoot and run like mad, run like mad without shooting, or stand still where I am? I should not mind one lion by itself; but four!—it is really too much of a good thing, and without anyone to back me up! The lions are plainly in the same fix as myself, for they evidently cannot make up their minds whether to attack me or to run. They are certainly most noble looking animals; but I have but little eye for their beauty. Keeping rather a steady watch on the largest, which is a foot or two in advance of the others, and is growling deeply and slowly lashing its tail against its sides as we see a cat do at the approach of a strange dog. The least movement of my own causes the growls to become louder and the tail to lash quicker, and I soon see that it would be death to run away; so I take a long, deep gulph to still the beating of my heart, and prepare for the worst. But the worst has passed, for the lions are evidently not my equals at a staring match, but presently begin to turn their heads away from me, and then start off together at a slow, high, sweeping canter, graceful as that of a high-bred lady's horse, and apparently made without an effort. I feel sorely tempted to send a bullet after the largest, but under the circumstances I come to the conclusion that discretion is the better part of valour, and let them go. After cantering about fifty yards they stop and turn round to take another look at me; but seeing that I had not moved they start off again, and I am at liberty to admire their beauty at my leisure. One is a lioness, two are young males, and the other is a very large and handsome male, with a yellowish-red body and an immense almost black mane. I survey him with coveteous eyes, and inwardly determine that if we meet again "in thunder, lightning, or in rain," I will have his skin or know the reason why.

The lions gone the Kafirs reappear, and I rate them soundly for running away and taking with them my spare gun, but I only elicit a succession of grins which spread over their sable vissages from ear to ear; and so on again we pick our devious way among the brown tree trunks, gnarled and weather-beaten by the storms of succeeding cycles. Many a massive trunk, rugged as a Waterloo veteran, lies prone on the ground where it fell, either struck down by the unerring aim of the awe-inspiring tropical lightning, or the body and branches finding the lower part—eaten away by the ruthless flames of the ravaging fires—no longer able to sustain their weight, bent slowly over and came to the ground with a long, lumbering crash.

The incident of meeting the lions has awakened my dreaming faculties, and we march merrily along, keeping now a good look out,

as we cannot be very far from the tents. At length we cross the spruit where the koodoo was killed. A drink of water would be acceptable, but there is none to be had but by digging in the sand of the bed. A fine, handsome waterbuck is here sighted, and we creep up to get within shot, but he has got our wind and is not to be caught napping, for he

> "A moment gazed adown the dale,
> A moment sniffed the tainted gale.
> * * * * *
> Then, as the foremost foe appeared,
> With one brave bound the copse he cleared,
> And stretching forward free and far
> Sought—"

not "the wild heaths of Uum-Var," but the deep shadows of the forest depths.

On again. We must be close to the camp, for the sun is not far above the western horizon. Ah! here is a place I recognize—an open glade in the bush about a hundred yards across, with one dead old tree trunk standing alone in the centre. Hulloa! two enormous buffalo bulls feeding by themselves on the opposite side of the glade! I must have at least one of them. Down again at full length, and I creep up with heart beating with excitement. When within about forty yards I take careful aim and strike the largest in the middle of the shoulder, and then foolishly rise to reload the barrel. The stricken buffalo no sooner sees me than with the speed of a railway train he makes straight at me, and I turn to run, thinking I can gain the old tree first, and take another shot from that coigne of 'vantage. Within five yards of it I turn my head to look where the buffalo is. In the act of turning I fall "all of a heap" into a large hole made by the ground sinking where some burrowing animal had been at work. I have but time to think that my day has come when the buffalo, still galloping, places his fore feet on the very edge and takes the hole in his stride. It is a narrow escape for me, for had he been six inches in advance in his stride he would have come right down on me, and reduced me to pulp. A few yards further and he stops, evidently wondering where on earth I have got to; but I do not give him much time to find out, for pulling myself together I fire from the hole through the long grass, and give him a settler in the heart at five yards. The Kafirs then come up, shouting and gesticulating, for they had thought that I had been thrown down by the buffalo. Leaving the carcass till the morning we reached the camp at dusk.

My friends were glad to see me, but had not been alarmed, having guessed the cause of my absence; and over a glass of grog and a pipe we recounted to each other our adventures.

And now, who would not live a life like this for five or six months? I have described two days' work, chosen at hap-hazard. many other varieties of game are to be met with,—giraffes,

rhinoceroses, boars, panthers, and many different sorts of bucks. Are you tired of the rifle? take a shot-gun and stroll down the river; guinea-fowl are plentiful, bustards (lesser and greater) are not uncommon, and floricsus may be flushed (dogs will not live) in great numbers, and richly-plumaged birds for stuffing may be killed by the dozen. Hippopotamus and crocodile shooting, too, is exciting, and the former profitable. The rivers are full of fish, and the lover of the "gentle" sport can employ his time to his heart's content. The geologist can take his spade and dish and wash for gold in the rivers, or search for minerals among the rocks on the hills; and for the botanist there is as immense a field of undescribed specimens as probably exists on the earth's surface. Then the return to the camp! the welcome glass of grog, the pleasant chat about the day's work, the plentiful dinners, and the grateful pipe! Then there is the log to be written up by candle-light, and then lie down early. Have a quiet read for an hour or so, and repose yourself to healthful slumber, hushed by the moaning of the trees and the breathing sighs of the night wind.

IMPISI.

Words we don't like to hear

OF COLONIAL USAGE.

"I was never so bethumpt with words."—KING JOHN.

We don't like to hear, and with pain it is stated,
Because it's an error so constantly prated,
And done with so pleasant and comely an air
As to seem but a trifle when said by the Fair;
We mean when some news is related to Nancy—
To hear her response in the foolish word *Fancy*!

We don't like to hear when some truths are imparted,
And joy is intended to many faint hearted;
A tale of Elopement, or subject of Scandal—
When some are so ready to listen or handle—
To find all that's said is but taken in one sense,
And both Truth and Fiction are treated as *Nonsense*.

We don't like to hear when we ask information
Respecting a taste, or an aim, or a station,
If smoking's a habit, or croquet a pleasure?
Or whether some duties allow of much leisure?
To our great disgust and discredit to Father
To hear all our queries dispatch'd with a *Rather*.

We don't like to hear where a subject's afloat—
It may be of moment, or no little note—
The man may be honest, and good his intentions,
And all to the contrary wildest inventions ;
Whatever the topic, the point, or the wish,—he
Seems but a novice who smells the case *Fishy*.

We don't like to hear when at chess or at cards,
The pastime of lawyers and parsons and bards ;
Should "hands" in a movement create a surprise,
That ought not affect either single or wise,
To pine that the trifle is good for the quizzers,
And causes the queer exclamation of *Scissors*.

We don't like to hear if in walking the street,
A neighbour or stranger we happen to meet,
Who puts out his hand, and begins an odd tale—
Forgetting the same may be last year's or stale—
Then leaves us to guess, when he's finish'd his song
What he means by his last parting words of *So long*.

We don't like to hear in the worst case of all,
When seated at table and quite within call,
To hear a fair damsel and simply from habit,
Or we should be last of all cynics to blab it ;
Repeating her queries, impatience to harden,
And every moment keeps *Begging your pardon*.

We don't like to hear from the lips of the chaste
Where diamonds are diamonds, and not made of paste ;
Where modesty nestles and graces its home,
And innocence makes few pretensions to roam
It seems to imply that some organ is leaky
Where too oft allusions are made to the *cheeky*.

We don't like to hear in the voice of the meek,
That oversteps prudence by way of a freak,
Not even the sound if it harbour the sense
Nor any allusion where art may condense ;
We repeat what we mean, in the hope it may last,
We don't like to hear a young lady say *fast*.

We don't like to hear, for so nice we become,
As age brings all subtleties under the thumb ;
That what creates laughter as matter of speech,
When *burnt* in by anguish some wisdom may teach,
And hence we are griev'd (if to some it seem folly)
To hear some Amelia Louisa say *jolly*.

SAM SLY.

Cape Town, January, 1875.

A New Year's Jaunt.

For once in a way we mean to be gay, to kick up the dust, and spend a fine day! We are tired of the old year, and pine to be on with the new. In a word, we are sick of humdrum city life, and long for country air and salt sea breezes. To this end we canvassed our acquaintances, and arranged the preliminaries for thoroughly enjoying a New Year's holiday. On the day agreed to, as the clock struck six, a waggonette with six spanking greys clattered smartly up the street, and then stopped at our door. In a few minutes ladies and rugs got mutually adjusted; comestibles were securely fixed in the commissariat cart; and a well-packed party of pleasure were off for a long day's jaunt to Hout's Bay. Crack-crack went the whip, and round went the wheels, as, with easy grace and consummate skill, our Malay coachman fingered his ribbons, and piloted his team along the crowded highway, already dusty with New Year's revellers and jingling vans. Keen and fresh blew the westerly breeze from the sea, while light and misty clouds o'erspread the sky, and promised an exceptionally cool day. Mowbray, Rondebosch, and the pretty woods of Wynberg were soon left behind us, and then the sun came forth in glowing splendour to give us a series of dissolving views. Around the jutting crags of Protea and the hills of Constantia, the vapourous clouds in fantastic masses were playing hide-and-seek, as if uncertain whether to creep into crevices or melt into rain. Trailing over bushes and weaving themselves into gauzy veils and gossamer robes of mist, these patches of cloud—now thick, and now thin, now dark, and now dappled with streaks of light—effectually cooled the ardour of the sun, and added new beauties to very familiar objects indeed. As we turn out of the Bay-road near the eighth mile-stone, and grind the fine gravel of the admirable carriage-drive that leads straight to Constantia, we begin to realise how rapid has been the growth of all our suburban villages since the running of the railway, and how great has been the increase in wealth of this once wild and open country. While all the villages along our route were evidently *en fête*, and full as noisy as barking dogs, hurraing children, and half-tipsy labourers and their sable wives could make them—we now enter upon rural quiet and a Sabbath calm, that are inexpressibly refreshing to the weatherbeaten citizen and wind-dried denizen of Cape Town. How our lungs expand, and our eyes begin to brighten, as we inhale the mountain air and sniff the perfumes of protea and heather bushes, and mark the bright patches of bulbs and wild flowers fringing the roadside! Far away to the left is a sea of heath and reed, inclosed in snowy sand-hills and a bright blue horizon; while towering to the right we have masses of rough rock upheaved in frowning walls and perpendicular citadels. A perfect chain of mountain crests lie spread out before us; and in the dim mysterious distance we get glimpses of sunny valleys and

wind-worn capes that quite unsettle our local geography, and recall our earliest dreams of Highlands and the Rhine. But, ere we know it, here we are at the gates of Klein Constantia. But not for us will its hospitable host extend the welcome hand to-day, nor invite our thirsty souls to slake their drouth in his icy and gloomy cellars. Away to the right lies our tortuous and difficult road, and marvellously beautiful are the scenes set before us. In every turn of the steep and winding way we find new beauties to engage our thoughts and keep up our artistic enthusiasm. The drive, in fact, resolves itself into a series of picture galleries, full of wood and rock, of hill and vale, of fruit and bush and flower, and only wanting large expanses of blue water to hide the plains, and complete the conquest of the senses. Up and up, and ever up, we slowly trot along—past hanging woods of silver trees, and mountain ash, and wild horse-chestnut; past splendid farms and fruitful vineyards; past rude gardens and peach orchards; while ever and anon we dip into leafy lanes of shady ash and quivering poplar, only to emerge from the gloom into the light of ever brighter and better scenes than any we have yet experienced. Is this fairyland, with prisons for ogres? or is it chaos come again—when we begin to descend to the coast, and mark the enormous masses of lichen-covered rock that strew the hill-sides—and group in weird outline in the very foreground of our pictures? Whence come these stony messengers of death and desolation, if not from the towering crags that are like "Pelian" upon "Ossa" piled, and close in the landscape with their rugged fronts? Are these Titanic masses mere barley-sugar imperfectly crystallized? or are they the castles of mythic gods who have tried to scale the high heavens, and that have been torn with shot and shell in the unequal contest? In the pure morning air we can plainly see huge holes and rents in their sides, and we can hear the whistling of the breeze as it sweeps over the reeds and hardy bushes that flourish on their rocky escarpments and bristling parapets. Wasted by fire and worn by frost and wind, the mountains around are inexpressibly naked and gloomy; but here and there they have dark clumps of forest straggling down their dry ravines to join the green plain below, and inexpressibly beautiful as the fitful sunshine varnishes them into notice. In the way of colour, every variety of green is found in the heather; the bushes are grey and blue, and yellow, and red, ranging in tint from the brightest verdigris to the sallowest olive; and yet so true are the tones and so tender the tints in their mixture, that everything seems to be in the most perfect taste and impossible to be improved in the blending. Take all the beauties of the Kloof Road, Bain's Kloof, or Montague's Pass, shake them well together, and consume two delightful hours in passing them in review, and you have still something pleasanter to experience when you drive to Hout's Bay for the first time from Wynberg, and view some of the glorious scenes on our coast. We say nothing here of the lovely country at the back of Table Mountain, and the Twelve Apostles, because we were too far

off to examine them closely, but they were very suggestive of Rhineland and the valleys of Wales.

But as hunger will tame the stoutest heart, so we were not sorry when the sand-hills of the Hout's Bay mountains came into view, and we caught our first glimpses of the sea. Like fields of ice, the glittering sand lay packed up on rocky shelves, drifted thereto by the pitiless pelting of furious south-easters, and many a wintry blast. Wild and weird in the extreme looked the haggard hills on our right, while the mountains on our left trended away to Simon's Bay, and seemed apparently well wooded. But now the roadway gets more and more sandy and tortuous. In some parts it is so narrow that we are forced to turn out of it into the bush in order to let a fish cart, drawn by six mules, pass us with its finny load; evidently not a nice path to travel on a dark night; and, but for a clever coachman, not a very difficult thing to get capsized upon it in the daytime. At length we reach the beach, and rush our horses through the cooling waves that are lapping two miles of sandy shore, and then help to outspan them in the very throat of a bushy pass. With what perfect *abandon* the poor dumb brutes give way to their feelings and enjoy the luxury of a hearty roll in the sand. Over and over they roll their steaming bodies, and clatter their hoofs together in perfect enjoyment of dust and liberty at their journey's end. A canvas manger is soon fitted on to the pole of our vehicle, and a good feed of oats and chopped straw at once puts them into good humour; after which they are driven knee-haltered to the watering-place, and left to their own devices for the day. Meanwhile the ladies have clustered under clumps of shady but diminutive banian trees that line the shore, and are busy preparing the materials for a hearty breakfast. While they are engaged in this, let us examine our sorroundings, and tell what Hout's Bay is like. It is more of a lake than a bay, owing to its being nearly land-locked; while its tiny waves fret everywhere against a pebbly shore of smooth round stones, except where they slide quietly over a smooth and hard sandy beach of nearly two miles long. From one end of this extensive curve of shore to the other there is not the slightest obstacle to be met with in the way of rock or stone. It is the very perfection of a bathing place, and as the beach is nearly one hundred yards wide, any number of carriages could be driven over its hard and snowy sands with ease. From where we were encamped, we could see that some sort of fishery was established at the other end, but it needed a powerful glass to make this out distinctly. In our immediate foreground was a grand group of waterworn rocks, leaning against bushy and rocky cliffs, and evidently a splendid stand for those who owned long fishing-rods. To the crest of these cliffs we could trace an old and but little used carriage track, that seemed to lead to a ruined fort or look-out station, and from which a fine view is obtained over the bay and the ocean, beyond the headland that divides this bay into an inner bay and an outer channel. After a sumptuous feast we all strolled over to the distant fishery, and very

soon prevailed upon two old sea dogs to hire us one of their boats, on condition that we helped to put it into the water and draw it up again when tired of sport. As the rest of the men were away on the New Year's spree, we were obliged to make the best of a bad bargain, and assist to drag a very heavy boat down from the shed to the beach. Off went our boots and socks, trowsers were tightly rolled up, and we literally put our shoulders to the strain, and by main force dragged the clumsy craft over very imperfect rollers into the smooth bay. The ladies laughed at our launch, but looked very serious when we joined hands and invited them to dispense with arm-chairs and be carried by us into the boat. A good deal of fun was got out of this incident, but fortunately some of our party were tall men, and the water was not too deep for the purpose of embarkation, and soon we were all safely ensconced aboard. In a few minutes a clever old fisherman rowed us to a likely spot and caught a couple of crayfish, and with this for bait, and a good supply of lines, we were taken out into deep water, and beyond the Point anchored within a few yards of a group of rocks that proved a perfect nest for fish. While keeping close to the shore we were much struck by the clearness of the water, the swarms of fish about ten inches long that infested the seaweed, and the wonderful roundness and smoothness of the stones as big as cocoa-nuts that strewed the beach. As we neared the Point, the bay looked a perfect little Scotch lake. A sketch made here by one of our party gives no idea of any outlet to the sea, and the mountains coming down sheer to the water's edge complete the illusion. The moment the Point was rounded the scene changed like magic. The apparent lake was seen to be a mere inlet of the sea, while the rise and fall of the boat on the yeasty waves, soon made us aware of the peculiar powers of salt water. To the right towered a mountain not unlike the Lion's Head, but curiously fissured down the centre, as if about to part in two, and pierced in many places with hollow galleries through which the blue sky could be seen quite plainly. Then came the open ocean, while in the dim distance the mountains grew lower and lower, till they faded away towards Simon's Town, and we felt that we were in the grasp of the "Mal du mer." Never were fish so greedy as the lively young "Hottentots" and "stump noses," leaping and flashing around us near these rocks. As fast as the lines were thrown overboard there would be a tug at the bait, a twist of the wrist, and the fish were landed in a trice. The contagion of sport soon spread to the ladies, who were even more successful than the gentlemen of the party, and were with much difficulty induced to go home again, while the sport was so easy and exciting to all. Gradually, however, while they were absorbed in their lines, a cold sea fog was stealing over the bay, and shrouding all the hills as in a dissolving view, and it was startling to look up and find all the landmarks gone, and the boat bobbing in an open sea, where only a few minutes previously we were riding so securely and pleasantly. At noon we put the boat's

head round, and almost immediately afterwards we ran up against a shoal of porpoises that were leaping and tumbling about like so many sable mountebanks in chase of their prey. Out came the sun again, and the fog was sent flying over the hill sides, patches of it sticking to the bushes like bits of gauze, and trailing along the water like the smoke from a gun. Simultaneously the water grew black and streaky with enormous shoals of "harders" or Cape herrings, that went surging past us in tremendous masses, and caused the fisherman to cry out that it was just like their impudence to come on the day when there was no one to help to catch them in the big net. The yield of fish in Hout's Bay is occasionally enormous; and the sieve has been known to break, and still catch enough to load up four large wagons with. When we neared the beach again we prepared for a ducking, as the tide was high and the waves were breaking fast. However, we boldly backed the boat, and, standing ready for the leap, we managed to run her up in water two feet deep, and get the ladies out without a wetting, but not without violent physical exertion to the males. You can therefore imagine with what gusto we attacked the lunch prepared against our return by the servants, and how placidly we lay on our backs and toasted the health of all absent friends as we lounged in the shade of the welcome bush. These bushes, by the way, are very curious in their shape, very perfect in their shelter, and send down an infinitude of cord-like roots into the mounds of white sand in search of moisture. They are, in fact, umbrella or banian trees in miniature, and a most effective means of binding the soil, and preventing miles of sand accumulating in the summer. After all, the key of a good picnic is an easy digestion and cool drinks; and if you can get these, joined to a calm day, a bright sky, sea breezes, and good-humoured—not to say jolly—companions, what more can man want in the way of change? As we reclined at our ease under these leafy umbrellas, we had ample time to enjoy the varying tints of the water, and to indulge in the *dolce far niente*. Face to face with nature, and far from the madding crowd, how small in comparison seemed our petty ambitions and personal wants with the eternal silence of the hills and the ceaseless lapping of the waves on the beach. Here leaped and gambolled the lively porpoises, while the bay was streaked with patches of blue and green and brown and yellow, as the winds and the fish ploughed over and through its surfaces, and played with one another. Oh for a yacht to cleave these tiny waves, and spend a long day in hugging the coast! Oh for an artist to catch the shifting scenes as they arise, and give us some idea of what we lose by our apathy and distaste for adventure! Time warns us, however, to cook the kettle and brew the coffee and tea, and make ready against a final start to town. As the sun nears the horizon, a growing breeze has silently sprung up, and now threatens to turn into a misty south-easter. The scud flies along the water and drapes the crests of the hills in ribbons of cloud. The air grows chill and damp, and soon the glories of Hout's Bay

are left far behind, as we begin to retrace our steps to the upper country, and bless our stars with meeting with such fine weather for our trip. The last we see of the bay is the belt of foam dashing against the lava-like rocks that protect the fishery, and the increasing mist that has settled down on its waters and wrapped the horizon in gloom.

On our return, our first halt is made at Mr. ————'s farm, where gigantic camellias and enormous peaches invite a passing scrutiny. Our bachelor host is only too pleased to show us the merits of the soil, and invites us to a splendid feast of peaches and pears. His trees are literally loaded and bent down with fruit, and it is with a series of shrugs—truly Parisian—that he deprecates our praises, and apologizes for his orchard being so backward this year. In another fortnight he declares he will gladly give us a bushel of peaches apiece, but at present we must choose for ourselves, and not be too particular about ripeness and flavour. We take him at his word, and truly we are royally feasted. May the shadow of Monsieur B———— never grow less.

And now we are nearing Constantia we have ample time to bless the road-makers, who have spoiled the natural advantages of Hout's Bay by designing such a villanous route to the sea. The path is poorly chosen, and full of holes and sand and ruts ; but a very little skill in the engineer would have given us a more pleasing highway and spared us many a dislocating jolt. We are beginning to grow sleepy and sulky, and disposed to quarrel with the miserable wretches who have been cutting down some splendid gum trees and exposing us to the slantng rays of the setting sun. When lo ! the heavens are all aglow and aflame with the roseate clouds of dreamland, and the back of Table Mountain looms up before us in all its magnificence and breadth. The sounds of harp and fiddle, and sackbut and dulcimer and drum grow plainer and plainer as we near the plantation. The spirit of dancing and mirth is abroad, and soon we dash past dusty groups of demented natives waltzing and circling under shady trees, and perspiring with heat and happiness at every pore. The highroad once regained, we are enveloped in dust. The crowds of happy pedestrians give us a cheering shout as we push our six greys at a smart trot past and between them. The valleys grow gloomy and grim ; the mountain crests are buried in mist ; and we are only too glad to draw our wrappers and rugs around us, and to keep ourselves from nodding ;—in a word, the glory of the day has fled, and we are again reduced to the prosiness of everyday existence. When town is reached we are sunburnt and tired. Table Mountain is hidden in cloud ; the holiday-seekers are tumbling in promiscuously ; and, except for empty hampers and a few bundles of fish, we have nothing to show how thoroughly we have spent and enjoyed our New Year's holiday. And yet we have been thoroughly happy, and mean to go again next year. If we do, we shall stick to our saddles, and eschew the bruises that are inseparable from wheels and springs on a mountain road.

On the Study of Geology.

By Geo. W. Stow, F.G.S. and F.R.G.S.

PART I.

In a short series of papers, as this must needs be, it is impossible to give even a simple outline of the marvellous events that have taken place on the face of this earth—events which the science of geology has been enabled to describe with a greater degree of accuracy than many of the historical occurrences of the last century. Whatever we know of these latter has been transmitted to us in the accounts given by men swayed with the blinding feelings of opposing and prejudiced factions—feelings that made them slur over or distort everything which they handled—whereas the records of the past history of the world were placed in the unyielding rock, by God's good providence, to teach us in aftertimes "the mighty works that He had done in the old time," and for this reason, therefore, could never be tampered with.

I shall not touch upon the various hypotheses that have been advanced, to account for the origin of our planet. These are speculations that I do not expect will be solved in our generation; sufficient, however, is known to fill our minds with admiration and astonishment of the supreme wisdom that has filled our world with exuberant life.

The lowest rocks, at present, found in the world's history, belong to the *Laurentian* or *Pre-Cambrian* system. They are stated to occupy a thickness of at least 50,000 feet.

What an enormous period must not the deposition of a series of such vast dimensions have required?

Who can tell the number of the unknown length of years that must have elapsed since that time? Still, even in those remote ages, we have the strongest evidence that there existed an abundance of life.

Among the rocks of this period, belts of limestone are found varying from four hundred to a thousand feet in thickness. These belts appear to be of purely organic origin. They are composed of *Foraminifera*, such as the *Eozoon Canadense*. This wonderful organism has a nummulitic structure, and is the oldest of all the fossiliferous remains yet discovered. Even here, however, we find it in such prolific abundance that *Calcareous* reefs one thousand feet thick were formed of it. To what an amount of inconceivable millions must not a thing so minute have attained to have formed rocks of such considerable magnitude.

The *Cambrian* system which followed, reveals to us some of the conditions that then obtained, in that old primæval world.

From a study of these rocks, we find that there were currents, and shallow waters that left their ripple marks on the sand; that the tides

flowed and ebbed, and left the rippled shore to be dried and cracked by the sun's rays, before it was again re-covered by the returning tide; that there was not only sunshine, but that showers of rain fell, and printed over the yielding surface of the ground with rain drops, as distinctly as those that fall in the present day.

With regard to the life of that day, "a peculiar rich fauna" has been discovered, consisting of more than forty distinct species. Among which are the most ancient *Crustaceans* in the world. From their peculiar three lobed shape, they have been called *Trilobites*. Some of them were of large size. These wonderful creatures went on increasing in variety, or number of species, through the *Silurian* and *Devonian* periods which followed.

During the formation of the *Silurian* rocks, various types of animal life continued to multiply. In the lower beds they are found intermingled with obscure remains of *Cryptogamic* plants and rootlets. Ancient *Corals* adorned the rocks, and the *Pteraspis*, the oldest known fossil fish (whose genus was allied to that of the present sturgeon), disported itself in the surrounding waters, where multitudes of *Encrinites* waved upon their slender stems, and the early *Mollusca*, principally represented by *Brachiopoda*, such as the *Orthis* and *Strophomena* spread themselves over wide areas. The *Trilobites* had also increased so much in numbers that the silurian seas must have swarmed with them. The earliest evidences of *Vertebrata* have been found in that portion of the silurian system, called the Ludlow rocks, and "although no trace of a well ossified vertebral column" has been discovered, Professor Owen has been able to decide "that a well-developed fish brain, and reproductive system, were combined with the cartilageous backbone."

In the *Upper Silurian* seas other quaint fish-like forms seemed to have flourished co-temporary with the *Pteraspis*. Among them the remarkable *Cephalaspis*, or buckler-headed fish, so-called from the extraordinary shield that covered that portion of its body. Among the same deposits a gigantic *Crustacean*, called the *Pterygotus*, makes its appearance. This creature has been estimated to have attained a length of some six or seven feet, and about a foot in breadth and thickness. It was armed with nippers, with which, no doubt, the monster seized its helpless prey. This seemed to be one of the many instances, noticeable during most of the geological periods, viz., that various types of animal life went on developing their characteristic forms until they attained a kind of maximum perfection, after which they gradually receded and became extinct. What should we now say if we saw a lobster-like creature arriving at such colossal proportions?

The advance of organic life during the *Devonian* and old red sandstone period is well marked, and new light is thrown upon the physical conditions under which it existed.

During this time fresh water lake systems have been traced, with uplands interspersed between.

These latter were covered with an increasing number of primitive forms of land plants some of them becoming arboraceous in their dimensions. During the deposition of the lowermost rocks most of them were "flowerless *cryptogamic* plants of an inferior organization," while in the later deposits of this system were *Coniferæ*, *Sigillariæ*, and *Lepidodendra*, with a variety of beautiful ferns and other kindred forms.

The upper Devonian flora, of which some two hundred species are known, according to Sir Charles Lyell approached so gradually yet closely to that of the carboniferous period (plants of a higher grade being so extremely rare), that we are led insensibly to the idea that there must have been a progressive development. The inhabitants also of the ancient Devonian seas were rapidly increasing in numbers. Among the fish of that period is found the gigantic *Asterolepis*, clothed with a strong bony armour covered with star-like bosses. Its jaws were armed with two rows of teeth, the inner or larger ones having a reptilian character. This formidable looking fish attained a length of from twenty to thirty feet, and must have been the terror of his native element.

Fifty-one species of *corals* have been found in the marine rocks of the Devonian system, together with eleven of *Cephalopoda*, and one hundred and fifty of *Mollusca*. Of these last, one fifth are found in the *Carboniferous* rocks above. The family of the *Trilobites* was still a numerous one, and many beautiful specimens of the *Phocops* and *Homolonotus* are found in the Devonian rocks of South Africa. The eyes of some of these ancient fossil *Crustaceans* are, in some instances, most wonderfully preserved. Some species possess complex organs of vision, each of which is composed of a large number of separate lenses, each lens a perfect eye.

These lenses have been microscopically examined, and the investigation has proved that the light of the sun, in those remote ages, was identical with that of the present day, and proving also, as a writer in *Chambers'* has well expressed it, "that the relation of light to the eye, and the eye to light, were exactly the same then as now.

What a marvellous scientific triumph is this, by which we are enabled to realize the glorious sunshine of the Devonian age, as well as that of our own.

It is during this period that the earliest known fossil insects make their appearance.

According to one of our great geologists, they consist of those of four species allied to the *Neuroptera*; another was a gigantic *Ephemera*, whose wings had an expanse of five inches. The former were furnished with "a stridulating or musical apparatus, similar to that of the cricket."

Here again is another triumph of scientific investigation, for as Dr. Dawson observes, "this structure introduces us to the sounds of the Devonian woods, bringing before our imagination the trill and

hum of insect life that enlivened the solitudes of those strange old forests."

Following up the rapid survey we are making, we next arrive at those wonderful *Carboniferous* deposits, whose vast treasures of hidden fuel have been stored up during the unknown ages of an incalculable past, to become, in our day, the sources of unparalleled national civilization and prosperity.

The human mind falters in trying to grasp even a vague idea of the enormous periods through which the earth must have passed, previous to the commencement of the era we are now considering, periods during which rocks—many miles in thickness—were deposited, consolidated, upheaved, and denuded to an immense extent, and the eroded *debris* again re-deposited, consolidated, and gradually upheaved above the surrounding ocean—again, and again, to be subjected to the same unvarying law of continuous change.

And amid all this endless changing, we can distinctly trace a continued increasing and expanding of the various types of life from the more simple forms to those of more elaborate structure and higher organization.

The *Carboniferous* rocks appear to have been laid down under physical conditions different from those that preceded them. They seem to shadow forth probable continents, containing within their limits, or along their shores, enormous swamps and marshes, unbroken for hundreds of miles, and covered with a dense rank vegetation of the most luxurious growth, that rejoiced in a warm, humid climate, where, for thousands of generations, those old-world forests grew up, flourished, and decayed.

"The testimony of the rocks" tells us that the various surrounding seas teemed with life, and that the multiplication of species went on at an increased ratio. Seventy new species of fish are found in the fossiliferous deposits of Britain alone, while no less than six hundred and fifty-three species of *Mollusca* have been discovered, referable to eighty-six different genera—the various types, as I have stated, diverging gradually further and further from the primitive forms. It was along the swampy shores, thus thronged with the occupants of the deep, that the exuberant flora of the period rankly flourished in wanton luxuriance, covering the dense and swampy brakes with the dark shadows of its increasing growth, amidst whose solitudes gigantic *Equisetums*, allied to the modern "Horsetails," grew with stems that attained a height unknown in these later times. Mighty *Lepidodendra*, and tree-like *Lycopods*, of which the club-mosses of Europe are the present puny representatives. Associated with these, towering *Arborescent Ferns* (mingled with *Sigillariæ* and strange *Coniferous* trees), bent and waved their graceful fronds in the moist dull atmosphere.

The wide-spread coal-beds of the present day tell us of the vast tracts of continuous country these ancient forests must have covered, and the humidity of climate that conduced to such a luxuriance of

growth was duly chronicled by the falling showers that printed their rain-drops on the moist and sandy shores.

The same evidence tells us that the *Carboniferous* period itself must have been one of enormous duration, for these rocks reveal to us not one horizon alone of wide-spreading forests, but a prodigious number of successive forest belts, each zone of which must have existed for unknown ages before it was entombed.

In England and America from eighty to one hundred beds of coal are known to exist; each bed was, at one time, such a forest as I have described, while the intervening rocks of sandstone and shale represent a subsidence of the country, when the encroaching sea submerged and buried the accumulated remains, until, by another oscillation of the surface, the sea again retired and left the land to be covered once more by the spreading vegetation, which, in its turn, was again entombed beneath the restless waters of the ocean.

That most of the coal-beds occupy the exact position of these ancient forests is proved. not only from the multitudes of prostrate trunks that are embedded in them, but also from numberless ones that still stand erect on the site where they grew, with their spreading roots striking deep into the rocks below; rocks from which they once abstracted their nourishment and their strength.

The evidences of animal life that peopled these weird-like dank abodes are at present very meagre; still, with the neighbouring waters swarming with inhabitants, we cannot but think that these forests must have been filled with their proper tenants. It is very probable that the conditions which caused the fermentation and mineralization of so much vegetable matter, might have been antagonistic to the preservation of animal organisms, and thus have destroyed the record of their former existence.

All that remains of the life history of the period are a few scattered relics of insect and reptilian life, such as a few shells of an extinct species of land snails, that once fed upon the rank vegetation; "an articulated animal resembling the recent centipede, or galley worm," that crawled among the decaying plants, "several specimens of the cockroach or *Blatta* family," "three species of *Neuroptera*, one beetle of the *Scarabæus* family, a grasshopper or locust, and several white ants or *Termites*," "much larger than those of any living species of the same genus," whilst among the latter (the reptilian) are the remains of "a gigantic aquatic reptile, with a powerful swimming tail," and a few evidences of air-breathing reptiles, capable of living on the land.

Scant, however, as these indications are, they are of great importance with regard to the life history of the earth. From the beginning of our inquiry we have found one form of life gradually succeeding another, each rising in the scale of existence, yet we cannot help remarking that up to the present time not the slightest vestige of either mammal or bird has been obtained from the closest study of the vast periods which we have here reviewed; but nature, still progressing,

shows us, from the examination of these ancient rocks, a still further advance in the advent of air-breathing reptilian forms of the types of the *Labyrinthodon* and *Archegosaurus*.

With such inhabitants, strange indeed must have been the appearance of these primæval wilds, and gaunt and fantastic must have been the gloomy shadows that pervaded them, in comparison to those that fall from the majestic forest trees of the age of man.

Leaving the *Carboniferous* rocks, the panorama passes on before our view, ushering in with all its changes the *Permian* period, the last of the primary or *Palæozoic* series. Here we still find the *Flora* closely allied in its genera to the one we have just considered, but the "testimony of the rocks," by the accumulations of *Breccias* and *Conglomerates*, seems to demonstrate that vast alterations of temperature were gradually being introduced. Many of these are full of angular and worn masses of the older rocks; some of the buried boulders are of huge dimensions, confusedly embedded in a red unstratified marl, many of them possessing polished and striated surfaces, identical in character to those of the more recent boulder-drift.

Professor Ramsay, one of the greatest authorities upon such a subject, considers that their origin is due to a remote glacial epoch, when sea and land-ice performed an important part in the operations of nature. This seems highly probable, for in the interval between the deposition of the last of the *Palæozoic* rocks and the commencement of the *Secondary* or *Mesozoic* series, a tremendous denudation of the older rocks took place, which extended over a period of such vast extent that when the first of the secondary rocks were laid down upon them a marked change had occurred in both the flora and fauna of this portion of the world's history.

Professor Ramsay's interpretation of these rocks would account for this, as the approach of the arctic cold would drive the descendants of the *Palæozoic* types of life to more congenial climes nearer the equator, where they would remain, while the great denudation of the more northern rocks took place. Before a gradual amelioration of temperature again allowed a migration northward of animal and vegetable life, so vast a time had intervened, and such a number of new organic developments had succeeded the older forms, that when they were placed in juxtaposition, the strong line of demarkation drawn between the fossiliferous remains of the two series was so distinct as to lead the earlier geologists to conclude that they belonged to a distinct creation.

In a case such as I have suggested, European palæontologists will have to look farther south than the formations of the present temperate regions of the northern hemisphere to obtain the connecting links that will in some manner fill up the gap between the two systems.

Having thus concluded a rapid survey of the stream of life through the *Palæozoic* ages, we will, in the second part, again take up the thread, and strive to trace it through the *Mesozoic* and other rocks.

Notes on the Properties of Fountains.

CHIEFLY FROM THE OLD NATURALISTS.

FOUNTAIN! Oh word grateful to the ears of a Cape farmer no less than *Fons Bandusii splendidior vitro* is to the lover of the Horatian verse, reminding one of a green oasis in the dusty plains of the Karoo or the barren plains of Namaqualand, where the magic influence of a little sweet water forms within its little circle a garden in the wilderness productive of green peas, peaches, and salads, and redeems the desert even from the reproach of utter barrenness. The properties of fountains, however, are various. Some are as in the Horatian ode *splendidior vitro*, yet whose waters are more nauseous and bitter than a solution of Glauber's salts. Some whose waters seem thick and muddy, yet are found sweet and wholesome. We have in the Cape fountains of all temperatures, impregnated with steel, sulphur, and carbonic gas; but still they are generally welcome, and must be very cautiously treated, as many valuable springs have been lost altogether in trying to open or enlarge them. The old naturalists are eloquent on the subject of fountains. Aristotle writes of a well in Sicily whose water the inhabitants used for vinegar, doubtless from slight saturation of sulphuric acid. In Bohemia (happy, happy land!) says Dr. Fulk, near to the city called Bilen, is a fountain that folk drink of early in the morning instead of burnt wine (what would the Good Templars say of this?), and in Paphlagonia is a well that makes men drunk who drink of it. The cause is that water receives the fumosity of brimstone and other minerals through which it runs, and retaining their virtue it fills and intoxicates the brain as wine does, although we must confess that we were before ignorant of the intoxicating power of cave brimstone. Ovid speaks of one of these sulphur springs,—

> Quam quicunque parum moderato gutture traxit
> Haud aliter titubat, quam si mera vina bibisset.

Du Bartus also appears to allude to petroleum springs in the following:—

> Salonian fountain, and thou Andrian spring,
> Out of what cellars do you daily bring
> The oyl and wine that you abound with so?
> Oh, earth! doth these within your entrails grow?
> What! be there vines and orchards underground?
> Is Bacchus's trade and Pallas's art there found?

We have in our days heard of Yankees and Hamburgers manufacturing champagne out of petroleum, but these verses of Du Bartus show that even in the middle ages that art was not quite unknown.

Ireland is a rare country for fountains (*Tober* in the Celtic), no

less than eighty town names being formed out of a compound of that word (Joyce). Ortesius tells us of one in that island whose water kills all the beasts that drink of it but not the people, who use it ordinarily.

Many of the Irish wells are holy ones, and were formerly (and a few even to this day) celebrated for their miraculous curative powers. Some of them being remarkable for the fecundating effects of their waters; notably one near Kilmainham, Dublin, called St. John's well, where a well-known "pattern" or fair was held on St. John's day until within the last few years, when the scenes of riot, debauchery, and drunkenness it caused compelled its suppression. This well took its origin in a vast old cemetery called "Bully's Acre," in which tradition says were interred the mortal remains of Brian Boru, Bryan Maguire, Dan Donelly the boxer, and other valiant Celtic heroes; and its percolation through the dead bones of generations was said to give a peculiarly fructifying effect to its waters,* which were eagerly quaffed by the female devotees. The origin of this "pattern" was no doubt originally a religious ceremony like that of the presentation of a kid to the *Fons Bandusii*.

Cras donaberis hœdo
Cui frons turgida cornibus
Primis et venerem et prœlia destinat.

It is also reported, says Ortelius, that near to the Isle of Ormus there is a great fountain found, the water of which is as green as the fields in spring time, and salt as the sea. He who drinks but a little of it is incontinently taken with a violent scouring, and he who drinks too much of it is scoured off the face of the earth altogether; and it is a curious and markworthy thing that I, the writer of this, one hot day in the Fish River bush essaying a moderate draught of a clear though salt spring I found there, on proceeding on my journey was also seized with a violent scouring and gastric disturbance, but as I had mixed the dose with a little *spiritus juniperi*, I escaped utter outscouring and still live.

Pliny speaks of a well in Sclavonia which is extremely cold, yet if a man casts his cloak in it, it is incontinently set on fire. Which—the cloak or the spring—is not very clear.

Other springs in the Island of Grantlaudl (wherever that may be) are mentioned which will both bake bread and roast meat put into them; and must, while coal is at its present high price, prove convenient for all housekeepers with small incomes.

Many wells are mentioned in Bœotia, Cappadocia, and other foreign parts which make the oxen or sheep drinking of them black, white, or red, as the case may be, and are invaluable as hair dyes to human

* In many parts of Ireland at the present day still exist fountains having a reputation for the cure of certain diseases, especially rheumatism, deafness, blindness, and diseases of the bladder. Many of these wells are thermal, and have mineral qualities.

beings. This latter colour is found chiefly in fountains on the shore of the red sea, from whence it may take its name. But the funniest fountain of all is one in Pontus, which turns the milk of all cattle which drink of it black, as "Pliny forgetteth not." What a treasure this would be to a London milkman for the sake of variety, as all parties there are tired of the shades of the substance vended as milk, varying from sky-blue to a bright canary colour; but a jet black milk would be really a novelty. There be some waters (more numerous, perhaps, than suspected) which make men mad who drink of them.

If some fountains make women fruitful, nature affords a remedy and others make them barren, notably one in Sicilia mentioned by Pliny.

In the Island of Chios is a fountain that makes men dull-witted. Have we any in the Cape Colony with the same property? We fear so.

Some fountains run cold by day and hot by night. Such was the fount celebrated by Tom Moore,—

> The fount, 'tis said,
> That played of old in Ammon's shade,
> Tho' icy cold by day it ran,
> Yet still, like souls of mirth, began
> To burn when night was near.

Certain strange waters in Germany, says Pliny, cause the teeth to fall out, and the joints of the knees to be loosed. Again a spring in Arcadia is said to be good against abortions, while in Sardonia are wells that cure sore eyes, as many of the Irish holy wells are supposed to do. One well is mentioned by Seneca in Arcadia whose waters no vessel—be it silver, iron, or brass—can hold it, but it breaks in pieces. Make your pitcher, however, out of mules' hoofs, as nothing else can contain it. Curtius calls it the water of Styx; we suppose because it sticks at nothing, but smashes all before it.

According to Josephus there is a fountain in Palestine that never plays on the Sabbath; differing in this respect from certain fountains in France that seldom play on any other day.

And in Italy (dear to all teetotallers) is the spring Blitone, which causes all who drink of it to abhor wine (*vide* Fulk, lib. 4),—so does Gladstone's claret and 16s. sherry. But strangest of all is that fountain in Germany which will drown all bastard children cast into it, but if born in legitimate wedlock they will be cast or be driven out of it safe and sound.

Another fountain in Sardinia, if a man who takes a false oath drink of it he straightway becomes blind. Solinus and Isidore, whoever these worthies may be, report this. It is a pity all the witnesses on both sides in the Tichborne case did not get a drink of this water after giving their evidence. In another Sicilian fountain, if a thief drinks he also becomes blind.

Aristotle mentions a spring that immediately began to dance when music was played near it, although quite still at other times. Playing fountains, such as those in Trafalgar Square, are, however, common enough. All of which properties of fountains my gentle reader may believe as much in as he thinks fit, not forgetting however the advice of Du Bart,—

> Sure in the legend of absurdest fables
> I should enrol most of these admirables,
> Save for the reverence of the unstained credit
> Of many a witness, when I just have read it,
> And saving that our gain-spurr'd pilots find
> In our days waters of more wondrous kind.

But indeed of these secrets we may say,—

Maxima pars eorum quae scimus, est minima pars eorum quae nescimus.

Although the nature of fountains is, generally sparkling, gushing, refreshing, and all that sort of thing, we cannot say that the nomenclature of our Cape fountains is of a very lively or exhilarating nature, as a reference to our maps will show, dotted as they are with a repetition of Brakke, Zoute, Warm Water, Pekel, and other fountains, whose names are suspiciously mineral; or trivial names such as Lange, Diep, &c. Let us, however, except one or two names, that is Bloemfontein or Lilyfontein; but again, what shall we say of Stinkfontein, Schietfontein, Mordenaarfontein, Kruitfontein, Slangefontein, Pekelfontein, Kalkfontein, Galgenfontein, &c. &c., and dozens of other unsavoury names very different from the fruitful *Fons Bandusii* with which we commenced this paper. In the name of offended nature, if a farmer has got a good fountain on his farm give it a good name,—something redolent of flowers, or at least of green peas or cauliflowers. Groenfontein is not bad, but Zwartefontein is execrable; so also is Modderfontein, for in this dry land we should not look a gift horse in the mouth, or a fountain either, even if its waters be a little muddy. Mooifontein is a pretty name, and so is Mooi Meisjes Fontein in Albany, now forgotten in the village of Riebeck. We would for old times' sake let the Oliphant, Leeuw, and Rhenosterfonteins all stand, but we would decidedly expunge the other ugly names we have mentioned, bringing into our minds instead of fresh water, recollections of Glauber's salts, brine, pickles, snakes, stinks, gunpowder, mud, and other abominations. Reform them I say altogether. They give to strangers an indefinite idea of saltiness, brackness, and a general dead sea aspect to our land which it does not altogether deserve.

H. H.

The Old Records of Graaff-Reinet.

CONTINUED.

The British General, having had his hands sufficiently full with matters connected with the central Government, it was not until February, 1796, that a successor to Mr. Van der Poel was sent down in the person of Mr. F. R. Bresler, who, upon his arrival, found the district in no better condition for the reception of his legal authority than his predecessors had found it. He, indeed, must have been treated with very little ceremony, for although he arrived on the 9th February, it was not until the combined meeting of the 22nd of the month that his arrival was officially communicated. He split with the local authorities immediately upon some formalities, and returned to Cape Town shortly after; Mr. Gerotz remaining in office as before. The Rev. Mr. Van Manger was the first to raise a difficulty. He refused to baptise, since the oath of allegiance to the British Government had not been taken. He was called to account, but presisted in his refusal until he should receive the orders of the British General.

Mr. Van Jaarsveld, who, upon the departure of Mr. Maynier, had been the first to suggest an oath of obedience to the burgher dominion, now proposed that the oath of allegiance to the States General of Holland should be exacted; whereupon Tregard resigned, and left the meeting, but was subsequently induced to withdraw his resignation. At the same time an appeal reached from the people of Swellendam for co-operation, they having also expelled their Landdrost, Mr. Faure. This, of course, was favourably received.

These disorders were not, however, of long duration. The tendency of such men as Van Jaarsveld to excess, and the necessity of a superior authority to keep in check the daily increasing disorganization of affairs, soon proved to the better disposed members of the Board of Heemraden that it was high time to come to terms with the British authorities. Accordingly, in the month of August a deputation, consisting of two members, Messrs. P. E. Kruger and C. Opperman, was sent to Cape Town with offers of capitulation; and Lord Macartney, willing to treat the matter with the utmost leniency, showed a disposition to look upon the rebellion as arising from national antipathy to British dominion, and having received the deputation kindly, sent them back with despatches appointing Mr. Gerotz acting Landdrost, and sanctioning the acts of the district Boards until the return of Mr. Bresler, who, upon his arrival, was received with every demonstration of respect and, on the part of Government, reconstructed the Board of Heemraden by re-appointing the members under the sign manual of His Excellency the Governor, at the same time accompanying these appointments with a complimentary recognition of Mr. Gerotz's services.

Having traced the border history from the year 1786, through

these various stages of disorder and ultimately of rebellion, to the re-establishment of order under the auspices of the British Government ten years after, it is clear that the troubles of that period arose from the efforts of imposing a government upon a people left for so many years to fight their way in the desert against the perils of the wilderness, the wild beasts, and the still more dangerous natives, and this without adequate means,—that it is to their having been left to acquire those feelings of personal independence, which time alone could soften and render susceptible even of the influences of regular government, rather than to their aversion on political grounds from any stated form of government, we must ascribe the fact of these people rising against the constituted authorities,—English as well as Dutch. To the state of insecurity with which these pioneers of civilization had to grapple, arising from their having invaded the haunts of the wild Bushmen and the boundary of the warlike Kafirs rather than to any wanton desire to destroy or enslave the aboriginees, must be traced the frequent commandos which have left the stigma of cruelty upon their memory; and can it be wondered at that the practice of slavery, sanctioned as it was by the usages and laws not only of this Colony but of all other colonies—an institution of the period common to all European nations who owned colonies —that these people in their circumstances also sought to enslave the natives?

Mr. Bresler's resumption of his duties was followed by the oath of allegiance being taken by the inhabitants, but the consequences of the recent disorders did not so readily disappear. Doubts arose as to whether the marriages contracted under the sanction of the local matrimonial court were legal. On reference to Government it was decided that all these marriages were illegal, and that all persons so married would be required to conform to the laws. It was not until the close of the year 1799 that the regulation requiring persons in the country districts to proceed to Cape Town and pass the Matrimonial Court was abrogated by the appointment of Matrimonial Commissions in the districts. When the Colony reverted to the Dutch, under the Batavian Republic in 1803—that republic being under the protection of the French,—the marriage law underwent a change in conformity with the usages of the French Republic, and the legal requirements were terminated by the sanction of the Matrimonial Court, and the parties were at liberty to complete the ceremony at church;—but it was not binding. An innovation like this, however, was generally repudiated, and the colonists held by the usages of their church; but the existence of the law gave rise afterwards to a proclamation by the British Governor, Sir David Baird, almost immediately after the capitulation in 1806, declaring the usage illegal, and prohibiting it for the future, on the ground "that in all civilized countries where the Christain religion is professed and respected, the marriage ceremony is justly reckoned a holy institution."

The change of government made no immediate change in the position or prospects of the border district. It was not only in debt to the extent of about 12,000 Rds., upon which interest at five and six per cent. was running—not only were the roads and public buildings falling to pieces for want of funds to keep them in repair, but the inhabitants were required to contribute to the claims of Cape Town and Swellendam. Thus a claim was made by the Government for repairs of streets and roads in and about Cape Town, amounting to 2,305 Rds., and the claim of the district of Swellendam was for 200 Rds. per annum for ferry dues at the Breede River for ten years. It was in vain to plead their destitute condition—their being thrown on their own resources for defence and all other public requirements; that only a very few of them, once in a year, found their way to Cape Town, and then generally at a season when the Breede River ferry was not of much use to them,—the Government so decided, and the taxes were levied along with the opgraaf and quit-rent. In one respect the British authorities improved the condition of the burghers. This was in respect of the system of impressment. A tariff of hire was fixed for transport and other services to Government. It was low certainly, but still a great boon to people who had never known what it was to receive remuneration for complying with the requisitions of Government. A burgher was permitted to charge as follows: for a horse-wagon complete, one Rd. per hour; an ox wagon, four skillings; a horse with saddle and bridle, two skillings; or one shilling and sixpence, nine pence, and four pence halfpenny respectively; this, however, was not until the commencement of 1802, when after further disturbances, to which reference will presently be made, the quartering of troops upon the district—at first ostensibly for the purpose of keeping up postal communications with Cape Town, but no doubt, in fact, for the support of authority—had caused it to be considered only fair towards the inhabitants that the maintenance of those troops should be no additional tax upon them.

The records of the year 1789 teem with reports of Bushmen irruptions; of their depredations in bodies of several hundreds at a time; of commandos and their successes in killed, wounded, and prisoners taken; of efforts made to conciliate these poor savages. Thus the Veld-wachtmeester Strydom, after reporting an irruption and his futile endeavours to fall in with the enemy, states that he "fell in with some Bushmen at the sources of the Kei and took three prisoners. That he left them on the farm of J. P. van der Walt, who after feeding them had permitted them to depart with the promise to induce their countrymen to follow peaceful pursuits." At the same time there is a report of the Landdrost (Mr. Fischer) stating that "he had recently, upon reports received from the Veld-wachtmeester of Achter Rhenosterberg, to the effect that about one hundred wild Bushmen in various parties had come in and expressed their wish to live at peace with us, he (the Landdrost)

had thereupon caused some of them to be invited to the Drostdy, and five of them having made their appearance, he had in the interest of the peace and prosperity of the land made them some presents of trinkets, and having treated them to the best of his ability, had sent them back to their kraals, in order that thus the rest of the tribe might become convinced of our friendly disposition towards them, and that we might by these means open a peaceful intercourse with these savages."

The depredations of the Bushmen were, however, not by far the most exciting circumstances of the period. With the recent insurrections and the patched-up issues still fresh in the memories of the people, an incident occurred which must claim to be considered the prime cause of all the disturbances which followed. The Veld-wachtmeester and Ex Heemraad, Adriaan van Jaarsveld —who figured so prominently in the disturbances which resulted in the retirement of the Landdrost Maynier, and subsequently of his successor, Mr. van der Poel—having had the administration of an estate and the guardianship of a minor, was upon rendering his accounts to the Board of Orphan Masters, charged with the forgery of a receipt rendered by him amongst these accounts. Upon the petition of the Orphan Chamber a warrant of apprehension was obtained against him from the Assistant Fiscal by order of the Court of Justice, and he was accordingly apprehended by the local authorities, and sent off to Cape Town under escort of a detachment of Cavalry, and in charge of the secretary of the District, Mr. Oertel. The party had barely reached the second drift of the Sunday River when a party of Boers fell upon them and rescued the prisoner. This force consisted of about thirty Boers under the Field-captain Prinsloo. The commando having halted on the ground whence the escort had returned back to the town, sent a message to the Board of Landdrost and Heemraden by one of the latter, whom they encountered on his way in, requesting them to come out to an interview. This was declined, but a deputation of two was appointed to form a commission of inquiry, who were to proceed to the camp of the insurgents, to protest against all violence towards the flag of His sacred Majesty the King, and to caution the burghers that none of them would be permitted to appear before the Drostdy armed; and that any illjudged step would be construed into an open attempt at insurrection, and all necessary measures would be taken to assert the dignity of His Majesty's flag. The deputation on their return stated "that the object of the burghers appeared to be merely to prefer certain reasonable requests, and to inquire on what ground the Ex Heemraad, Van Jaarsveld, had been apprehended, since they could not divest their minds of the conviction that his apprehension was in connection with the recent political troubles, which the Government had graciously consented to pardon and to suffer to pass into oblivion; but that for the rest there was no desire on their part to create any disturbance. Upon this the

messenger was sent to invite a deputation of three or four of the insurgents to attend and state their grievances. This invitation was responded to by the appearance at the Council Board of three field-captains and another burgher, who stated for themselves and their constituents "that the apprehension of Van Jaarsveld had caused the greatest distrust amongst the inhabitants. That it had led to the fear that none of them were safe, and that any of them would be liable to arrest without trial or appeal in the face of a general amnesty already granted by Government, particularly as several inhabitants of this district (amongst whom were some of the delegates themselves) had upon recent visits to Cape Town on matters of personal business, experienced that every endeavour seemed to be made to fix charges upon them with the view of causing their detention." The Landdrost replied that "it was impossible to suppose the authorities in Cape Town capable of such proceedings. That he could understand steps taken by the Government against individuals for crime or debt, but that, in the face of a general amnesty, Government never would re-open former political charges." He closed the interview with telling them that "as head of the district he was under no obligation to render any account of his proceedings to subjects under his rule and intrusted to his care. If they had any charges to bring against him they might appeal to the Governor, whose orders alone he recognized." In reference, however, to his own proceedings in the matter complained of, he had no objection to state "that in acting as he had done they should recognize him only as the lawful medium for the execution of the decree which had emanated from the Court of Justice. That the crime for which Van Jaarsveld had been apprehended was of such a nature that if he were guilty of it and left unpunished, there would be an end to all good faith in social life." They rejoined by offering to become sureties for Van Jaarsveld for the amount of the claim which would arise upon any proof of forgery, but "on condition of his being acquitted of the charge of forgery." Van Jaarsveld, however, had escaped, and remained at large.

In the following month of March, a letter was received from one Prinsloo, containing what the writer intended to be alarming intelligence: viz., that four English ships had landed at the Zwartkops River; that one person had been taken prisoner, and two others had narrowly escaped; and conveying a pressing request to the Landdrost to come to their assistance, and to rescue the land from certain ruin. In a postscript there was an intimation that upon the slightest signs of disturbance, Buys (a noted outlaw, living amongst the Kafirs) would enter upon the scene with all Kafirland. The Board did not attach much weight to this communication, taking it to emanate with Van Jaarsveld. The former Landdrost, Maynier, was now sent down as commissioner, supported by a military force. A strong detachment of troops under General Vandeleur was landed at Port Elizabeth from H.M. Ship *Rattlesnake*,

and the commissioner, thus supported, found no difficulty in keeping order. The commission extended over two years: viz., from the close of 1799 to the close of 1801. The district was under martial law, and it must be assumed that the functions of the District Boards were for the time suspended. There is a gap here in the records, a portion of which is missing. It is to be hoped that the records in Cape Town will supply this deficiency, since these two years of the dominion of Mr. Commissioner Maynier furnished a series of the most important events; in respect of some of which the commissioner was called to an account.

G. W.

On Materialism.

Much has recently been said and written on the subject of Materialism, and great has been the horror expressed against this fearful bugbear. But if we would only take pains to realize the metaphysical truth that it is very seldom that any two persons are able to attach the same meaning to any general term, we might discover that we are somewhat too apt to disquiet ourselves in vain. The supposed materialist will often be found to be as much a mystic as anything else. In fact the human mind is altogether too subtle to be caught and labelled. Our endeavours to apply the process to ourselves are blundering enough; but when we attempt to affix our very inadequate labels to minds greater than our own, the results are such as might well make us pause. The necessity for having eyes that see, ears that hear, and understanding hearts, is of infinitely wide application.

If the metaphysical aspects of the recent literature of the subject be examined in an appreciative spirit, it will be found that those among our leaders in physical science, who are at the same time psychologists, virtually admit that the relations of mind to matter remain very much where the genius of Bishop Berkeley perceived them to be more than a century and a half ago. True it is that since then physical science has worked marvels in analysing the properties of matter. To descant now on these wondrous achievements would be simply impertinent. No less true is it that psychology has made enormous progress in laying bare the workings of the mind. The sure foundations laid by Locke have indeed been securely built upon by those on whom his mantle has worthily fallen. True it is that henceforth psychology and physiology must go hand in hand; mind and body being, as far as our experience goes, inseparable. All this is indeed beyond dispute. But push these thruths as we will to their logical conclusions, how we come to live and move and have our being remains as much a mystery as ever; and there can be no greater misconception than the very common one

that this awe-inspiring mysteriousness has ever been seriously denied in the true world of science.

That is to say, the real mystery of life and matter in no wise disappears under the most searching physical and psychological analysis. For convenience sake the words "mind" and "matter" are used; but they are, after all, nothing more than *names* which we give the imaginary substrata of our consciousness. And the metaphysical position is quite tenable that either name might be used instead of both, because the various phenomena of our consciousness may be more logically referred to one substratum, call it by what name you will, than to two. This was Berkeley's position, and there is good reason to assert that it is virtually the view taken by the greatest modern thinkers who have turned their attention to the subject. The utterances of Mill and Huxley at least give forth no uncertain sound on this point. Berkeley called the one substratum of our consciousness "mind." It is in this sense only that he so strenuously denied the possibility of the existence of matter apart from mind.

To use the words of his latest editor, Professor Fraser, Berkeley's belief about the world of sense "was not a mere intellectual whim; it was the issue of deep human interest and sympathy. Men had suffered, and were suffering, he believed, from wrong ways of conceiving the manner in which the material world exists. * * * * A mathematical or spacial conception of what is real,—in a word, atomism—was involving men in that age of Newtonian discoveries in the perplexities of infinitesimals and the infinite, which all result from the supposition of an absolute quantity that is infinitely divisible. Metaphysicians were by this means able to raise a dust, and then complain that they could not see."

All that we know of so-called matter amounts to this: That it impresses on our consciousness, by means of our various senses, the ideas of extension, colour, number, sound, duration, motion, heat, taste, smell, hardness, weight, and, in fine, the innumerable so-called properties of matter. It is only by the never-ceasing and generally involuntary processes of perceiving, correlating, reflecting on and remembering these phenomena of consciousness that the mind is as it were built up. It is in fact the creature, so far, of its environment. Add to these receptive powers with which we find it endowed, the emotions, and we have the foundations of all mental phenomena. All can be accounted for without having recourse to the old and highly natural supposition that the mind has innate ideas of its own, such as those of time and space, independent of and apart from all experience. But it has taken many generations of deep thinkers to establish even this much, so subtle and almost inexhaustible are the phenomena involved in the investigation. What may be called, for want of more accurate phraseology, the relations of mind to matter, may be analyzed in this fashion. Take some common substance,—a lump of sugar, for instance. We say we see it, we handle it, and

we taste it: and we say that it is white, of a certain size and shape, and sweet, and so on. Now what really happens when we say we see it is this? Our field of vision is filled with patches of colour, and among these is one patch which we call white, and which we say is caused by the sugar. A man born blind, who had just been given his sight, could not in the least tell what these colours which suddenly fill his field of vision mean. He could not know that they are caused by or have anything to do with objects that are away from him,—that they are the appearanees of the various articles he has daily touched and moved amongst. The sensations of what he would afterwards learn to call light and colour would be all that he would be conscious of; but of their connection with the objects he had been familiar with in his blindness he would know absolutely nothing until he had gradually learnt it. There have been sufficient cases observed of adults whose sight has suddenly been given them by surgical operations to prove this. Everything connected with vision is really learnt by us, incredible as it seems to those who begin to investigate the sensation for the first time.

The next step can be easily made by taking into consideration the sensation of taste. We say the sugar possesses the quality of sweetness. Now it is clearly owing to our own nature,—to the nature of our palate and the sensations we get from it that this is so. Supposing that no being ever existed capable of tasting, how could such a quality as sweetness ever come into existence? What sort of existence could it possibly have? None, assuredly, that we can form any conception of. If no perceiving mind had ever existed, there is no conceivable way in which such a thing as sweetness could ever have been brought into being. From this conclusion there is absolutely no escape. Nor is it otherwise when we consider the roughness and hardness (or feeling of resistance) which, in common language, we say the lump of sugar possesses. The sense of touch is an element of these, just as the sense of taste is of sweetness. The whitenes, and other visiual phenomena are precisely analogous; and all the so-called properties of matter may be analyzed with a like result. Try to conceive, on the one hand, what phenomena the lump of sugar would present to the mind of a minute animalcule running over it; and on the other hand to the mind of some gigantic inhabitant, we will suppose, of another world, to whom it would appear as a tiny grain, too small to be perceptible to his senses of taste and touch, and requiring magnifying power to be perceptible to his sense of vision. By hundreds of considerations such as these the metaphysician is at last reluctantly forced into the admission that it is not only on the nature of the mind that all the phenomena of consciousness depend, but that all the properties we habitually attribute to matter are found to be nothing else, as far as is ascertainable, than these phenomena of consciousness. And what sort of existence matter can have, apart from these, remains an inscrutable mystery.

It may be urged, however, that such a line of reasoning as this is nothing more than arguing in a circle; inasmuch as the conclusions of modern psychology are first admitted, that mind is the creature of its environment; and it is then argued that the nature of the environment depends on the nature of the mind. But it is easy to see how this comes about. It is because of the inseparableness of those elements of consciousness to which man always gives the names of mind and matter. There is no language by which we can approach the subject without making use of these terms or their analogues to denote the imaginary substrata on which the facts of our subjectivity and objectivity depend. But this necessity of language does not do away with the fact that our subjectivity and objectivity cannot really be separated. The one implies the other. They are but the two sides as it were of our one unnamed substratum of consciousness.

The mind bent on self-analysis finds itself conditioned in time and space,—"a life-bubble in the ether of eternity." To time it can conceive no definite beginning and no definite ending; to space no definite bounds. The present is thus conceived as preceded by eternity, with eternity to succeed it, and space is thus conceived as infinite. These conceptions once grasped, the mind finds itself unable to substitute others for them. But they are essentially negative, not positive, conceptions; confessions of ignorance, not assertions of knowledge,—confessions, in short, that the mind with its environment is of such a nature that these conceptions are inevitable, or in metaphysical language necessary. To this ignorance —to this conditioned and limited state of our being, after all, everything is owing. It is assuredly worth considering whether, from the eternity of the past to the eternity of the future, throughout all the infinity of space, this is not the one aim and purpose for which the universe is governed to call into existence states of mind so conditioned that there shall be produced all the activities and energies that we see in life, all the joyousness of health, the exhilirating excitement of effort, the gladness of successful achievement, the happiness of love, the unspeakable gratifications arising from magnanimity, heroism, and self-denial, the infinite peace of goodness, and all else that goes to the making up of a rich and varied existence. But that mind should be finite and conditioned is essential to this. To produce these activities and energies a conditioned field of action is required, with chances and changes innumerable; with scope for failure as well as success, for evil as well as good. As ignorance is simply the absence of knowledge, so evil is the failure to attain good; and as long as there is a field of action for the one, the other remains possible. It is true that in other worlds than ours, and in other times than ours, the conditions may be such as we can now form no conception of; but conditions and limitations of some sort there must be if any conceivable energies and activities are to be possible. All the phenomena which life presents to us are thus depending on

the conditioned state of mind. Matter has variously been defined to be the limitation of will, the permanent possibility of sensation,—that which limits and conditions mind. This metaphysical conception of the material universe is in no wise contradicted by physical science; and it is equally in harmony with the old and new theories of creation and evolution. No greater misconception can be made than to suppose that the old scholastic materialism has any place in modern psychology, or in physical science. It is a bugbear that need trouble us no longer. What has recently been mistaken for it is a widely different thing. Where it still has a place, however, is in the lower and less intellectual of our theological systems; and there it always will be found as long as there are theological teachers who scruple not to dogmatise on the most abstruse psychological difficulties, while they never care to acquaint themselves with the simplest elements of the science they are dealing with. Pure religion, and undefiled, stands in no need of pschology, it is true; but unfortunately theology too frequently leaves pure religion, and undefiled, to take care of itself, while it rushes into controversy, ever ready to affix its labels of materialism and the like, with strange misappropriateness. Does not theology, just as often as science, make the mistake of not perceiving where knowledge ends and where faith begins? Happily, however, there is in both a growing tendency to see more clearly where the ever-shifting boundary should be placed; a growing reverence for all that is above us, all that is around us, all that is beneath us; a growing disinclination to despise aught as common or unclean; and a growing capacity for grasping the far-reaching idea which possessed the mind of Goethe when he put into the mouth of his Earth-Spirit the words,—

> "Here at the roaring loom of Time I ply,
> And weave for God the garment that thou seest Him by."

S. C. N.

The Song of the Alpine Shepherd Boy.

(Air—"The Merry Days of Old.")

Soon as the rosy dawn flings wide
The golden gates of day,
Gaily along the mountain side
I lead my flocks away.
My heart is light, and full of joy,
My voice is free and strong:
For I am the merry shepherd boy,
That sings the Alpine song!

Oh, I shall be a man one day,
To follow the chamois fleet,
Where the eagle watches for his prey,
And man ne'er set his feet.
Swiftly I'll fly o'er rock and glen,
With a fearless step and strong;
And I'll be the daring hunter then,
That sings the Alpine song!

And when the island stranger comes,
With heart as brave as mine,
I'll scale with him yon lofty domes,
Built by the Hand Divine.
This breast shall swell with noble pride
On the crest of mighty Blanc,
And I'll be the merry mountain guide
That sings the Alpine song!

The peaks of snow in a rosy glow
The last bright sunbeam steeps,
And from the dark'ning vale below
The grey mist upwards creeps.
Echo and I have sung all day,—
My flocks around me throng;
Blithely I wend my homeward way,
Singing the Alpine song!

JULIUS JACKSON.

The Death of Dr. Livingstone.

We have commenced this number of the *Cape Monthly Magazine* with the publication of a letter received from Dr. Livingstone by his friend Sir Thomas Maclear in the course of the past month. We close the number with references to the story of Dr. Livingstone's death, and extracts from the journals so admirably edited by the Rev. Horace Waller. A finer piece of work than Mr. Waller's editing of Dr. Livingstone's journals we have seldom, if ever, seen. We here append without scruple the following copious extracts from the concluding chapter :—

[We have now arrived at the last words written in Dr. Livingstone's diary : a copy of the two pages in his pocket-book which contains them is, by the help of photography, set before the reader. It is evident that he was unable to do more than make the shortest memoranda, and to mark on the map which he was making the streams which enter the Lake as he crossed them. From the 22nd to the 27th April he had not strength to write down anything but the several dates. Fortunately Susi and Chuma give a very clear and circumstantial account of every incident which occurred on these days, and we shall therefore add what they say, after each of the Doctor's entries. He writes :—]

21*st April*.—Tried to ride, but was forced to lie down, and they carried me back to vil. exhausted.

[The men explain this entry thus :—This morning the Doctor tried if he were strong enough to ride on the donkey, but he had only gone a short distance when he fell to the ground utterly exhausted and faint. Susi immediately undid his belt and pistol, and picked up his cap which had dropped off, while Chuma threw down his gun and ran to stop the men on ahead. When he got back the Doctor said, "Chuma, I have lost so much blood, there is no more strength left in my legs : you must carry me." He was then assisted gently to his shoulders, and, holding the man's head to steady himself, was borne back to the village and placed in the hut he had so recently left. It was necessary to let the Chief Muanazawamba know what had happened, and for this purpose Dr. Livingstone despatched a messenger. He was directed to ask him to supply a guide for the next day, as he trusted then to have recovered so far as to be able to march : the answer was, "Stay as long as you wish, and when you want guides to Kalunganjovu's you shall have them."]

22*nd April*.—Carried on kitanda over Buga S.W. 2¼.*

[His servants say that instead of rallying they saw that his strength was becoming less and less, and in order to carry him they made a kitander of wood, consisting of two side pieces of seven feet in length, crossed with rails three feet long, and about four inches apart, the whole lashed strongly together. This framework was covered with grass, and a blanket laid on it. Slung from a pole, and borne between two strong men, it made a tolerable palanquin, and on this the exhausted traveller

* Two hours and a quarter in a south-westerly direction.

was conveyed to the next village through a flooded grass plain. To render the kitanda more comfortable another blanket was suspended across the pole, so as to hang down on either side, and allow the air to pass under whilst the sun's rays were fended off from the sick man. The start was deferred this morning until the dew was off the heads of the long grass sufficiently to ensure his being kept tolerably dry.

The excrutiating pains of his dysenteric malady caused him the greatest exhaustion as they marched, and they were glad enough to reach another village in 2¼ hours, having travelled S.W. from the last point. Here another hut was built. The name of the halting-place is not remembered by the men, for the villagers fled at their approach ; indeed the noise made by the drums sounding the alarm had been caught by the Doctor some time before, and he exclaimed with thankfulness on hearing it, "Ah, now we are near!" Throughout this day the following men acted as bearers of the kitander : Chowpéré, Songolo, Chumah, and Adiamberi. Sowféré, too, joined in at one time.]

23*rd April.*—(No entry except the date.)

[They advanced another hour and a half through the same expanse of flooded treeless waste, passing numbers of small fish-weirs set in such a manner as to catch the fish on their way back to the Lake, but seeing nothing of the owners, who had either hidden themselves or taken to flight on the approach of the caravan. Another village afforded them a night's shelter, but it seems not to be known by any particular name.]

24*th April.*—(No entry except the date.)

[But one hour's march was accomplished to-day, and again they halted amongst some huts—place unknown. His great prostration made progress exceedingly painful, and frequently when it was necessary to stop the bearers of the kitanda, Chumah had to support the Doctor from falling.]

25*th April.*—(No entry except the date.)

[In an hour's course S.W. they arrived at a village in which they found a few people. Whilst his servants were busy completing the hut for the night's encampment, the Doctor, who was lying in a shady place on the kitanda, ordered them to fetch one of the villagers. The chief of the place had disappeared, but the rest of his people seemed quite at their ease, and drew near to hear what was going to be said. They were asked whether they knew of a hill on which four rivers took their rise. The spokesman answered that they had no knowledge of it ; they themselves, he said, were not travellers, and all those who used to go on trading expeditions were now dead. In former years Malenga's town, Kutchinyama, was the assembling place of the Wabisa traders, but these had been swept off by the Mazitu. Such as survived had to exist as best they could amongst the swamps and inundated districts around the Lake. Whenever an expedition was organized to go to the coast, or in any other direction, travellers met at Malenga's town to talk over the route to be taken : then would have been the time, said they, to get information about every part. Dr. Livingstone was here obliged to dismiss them, and explained that he was too ill to continue talking, but he begged them to bring as much food as they could for sale to Kalunganjovu's.]

26*th April.*—(No entry except the date.)

[They proceeded as far as Kalunganjovu's town, the chief himself coming to meet them on the way dressed in Arab costume and wearing a

red fez. Whilst waiting here Susi was instructed to count over the bags of beads, and, on reporting that twelve still remained in stock, Dr. Livingstone told him to buy two large tusks if an opportunity occurred, as he might run short of goods by the time they got to Ujiji, and could then exchange them with the Arabs there for cloth, to spend on their way to Zanzibar.]

To-day, the *27th April*, 1873, he seems to have been almost dying. No entry at all was made in his diary after that which follows, and it must have taxed him to the utmost to write :—

"Knocked up quite, and remain—recover—sent to buy milch goats. We are on the banks of the Molilamo."

They are the last words that David Livingstone wrote.

From this point we have to trust entirely to the narrative of the men. They explain the above sentence as follows : Salimané, Amisi, Hamsani, and Laedé, accompanied by a guide, were sent off to endeavour if possible to buy some milch goats on the upper part of the Molilamo.*

They could not, however, succeed ; it was always the same story—the Mazitu had taken everything. The chief, nevertheless, sent a substantial present of a kid and three baskets of ground nuts, and the people were willing enough to exchange food for beads. Thinking he could eat some Mapira corn pounded up with ground nuts, the Doctor gave instructions to the two women M'sozi and M'toweka, to prepare it for him, but he was not able to take it when they brought it to him.

28th April.—Men were now despatched in an opposite direction, that is to visit the villages on the right bank of the Molilamo as it flows to the Lake ; unfortunately they met with no better result, and returned empty handed.

On the *29th April*, Kalunganjovu and most of his people came early to the village. The chief wished to assist his guest to the utmost, and stated that he could not be sure that a sufficient number of canoes would be forthcoming unless he took charge of matters himself, he should accompany the caravan to the crossing place, which was about an hour's march from the spot. "Everything should be done for his friend," he said.

They were ready to set out. On Susi's going to the hut, Dr. Livingstone told him that he was quite unable to walk to the door to reach the kitanda, and he wished the men to break down one side of the little house, as the entrance was too narrow to admit it, and in this manner to bring it to him where he was : this was done, and he was gently placed upon it, and borne out of the village.

Their course was in the direction of the stream, and they followed it till they came to a reach where the current was uninterrupted by the numerous little islands which stood partly in the river and partly in the flood on the upper waters. Kalunganjovu was seated on a knoll, and actively superintended the embarkation, whilst Dr. Livingstone told his bearers to take him to a tree at a little distance off, that he might rest in the shade till most of the men were on the other side. A good deal of care was required, for the river, by no means a large one in ordinary

* The name Molilamo is allowed to stand, but in Dr. Livingstone's map we find it Lulimala, and the men confirmed this pronunciation.—Ed.

times, spread its waters in all directions, so that a false step, or a stumble in any unseen hole, would have drenched the invalid and the bed also on which he was carried.

The passage occupied some time, and then came the difficult task of conveying the Doctor across, for the canoes were not wide enough to allow the kitanda to be deposited in the bottom of either of them. Hitherto, no matter how weak, Livingstone had always been able to sit in the various canoes they had used on like occasions, but now he had no power to do so. Taking his bed off the kitanda, they laid it in the bottom of the strongest canoe, and tried to lift him; but he could not bear the pain of a hand being passed under his back. Beckoning to Chumah, in a faint voice he asked him to stoop down over him as low as possible, so that he might clasp his hands together behind his head, directing him at the same time how to avoid putting any pressure on the lumbar region of the back; in this way he was deposited in the bottom of the canoe, and quickly ferried across the Mulilamo by Chowpéré, Susi, Farijala, and Chuma. The same precautions were used on the other side: the kitanda was brought close to the canoe, so as to prevent any unnecessary pain in disembarking.

Susi now hurried on ahead to reach Chitambo's village, and superintend the building of another house. For the first mile or two they had to carry the Doctor through swamps and plashes, glad to reach something like a dry plain at last.

It would seem that his strength was here at its very lowest ebb. Chumah, one of his bearers on these the last weary miles the great traveller was destined to accomplish, says that they were every now and then implored to stop and place their burden on the ground. So great were the pangs of his disease during the day that he could make no attempt to stand, and if lifted for a few yards a drowsiness came over him, which alarmed them all excessively. This was especially the case at one spot where a tree stood in the path. Here one of his attendants was called to him, and, on stooping down, he found him unable to speak from faintness. They replaced him in the kitanda, and made the best of their way on the journey. Some distance further on great thirst oppressed him; he asked them if they had any water, but, unfortunately for once, not a drop was to be procured. Hastening on for fear of getting too far separated from the party in advance, to their great comfort they now saw Farijala approaching with some which Susi had thoughtfully sent off from Chitambo's village.

Still wending their way on, it seemed as if they would not complete their task, for again at a clearing the sick man entreated them to place him on the ground, and to let him stay where he was. Fortunately at this moment some of the outlying huts of the village came in sight, and they tried to rally him by telling him that he would quickly be in the house that the others had gone on to build, but they were obliged as it was to allow him to remain for an hour in the native gardens outside the town.

On reaching their companions it was found that the work was not quite finished, and it became necessary therefore to lay him under the broad eaves of a native hut till things were ready.

Chitambo's village at this time was almost empty. When the crops are growing it is the custom to erect little temporary houses in the fields, and

the inhabitants, leaving their more substantial huts, pass the time in watching their crops, which are scarcely more safe by day than by night; thus it was that the men found plenty of room and shelter ready to their hand. Many of the people approached the spot where he lay whose praises had reached them in previous years, and in silent wonder they stood round him resting on their bows. Slight drizzling showers were falling, and as soon as possible his house was made ready and banked round with earth.

Inside it, the bed was raised from the floor by sticks and grass, occupying a position across and near to the bay-shaped end of the hut: in the bay itself bales and boxes were deposited, one of the latter doing duty for a table, on which the medicine chest and sundry other things were placed. A fire was lighted outside, nearly opposite the door, whilst the boy Majwara slept just within to attend to his master's wants in the night.

On the *30th April*, 1873, Chitambo came early to pay a visit of courtesy, and was shown into the Doctor's presence, but he was obliged to send him away, telling him to come again on the morrow, when he hoped to have more strength to talk to him, and he was not again disturbed. In the afternoon he asked Susi to bring his watch to the bedside, and explained to him the position in which to hold his hand, that it might lie in the palm whilst he slowly turned the key.

So the hours stole on till nightfall. The men silently took to their huts, whilst others, whose duty it was to keep watch, sat round the fires, all feeling that the end could not be far off. About 11 P.M. Susi, whose hut was close by, was told to go to his master. At the time there were loud shouts in the distance, and, on entering, Dr. Livingstone said, "Are our men making that noise?" "No," replied Susi; "I can hear from the cries that the people are scaring away a buffalo from their dura fields." A few minutes afterwards he said slowly, and evidently wandering, "Is this the Luapula?" Susi told him they were in Chitambo's village, near the Mulilamo, when he was silent for a while. Again, speaking to Susi, in Suaheli this time, he said, "Sikun'gapi kuenda Luapula?" (How many days is it to the Luapula?)

"Na zani zikutatu, Bwana" (I think it is three days, master), replied Susi.

A few seconds after, as if in great pain, he half sighed, half said, "Oh dear, dear!" and then dozed off again.

It was about an hour later that Susi heard Majwara again outside the door, "Bwana wants you, Susi." On reaching the bed the Doctor told him he wished him to boil some water, and for this purpose he went to the fire outside, and soon returned with the copper kettle full. Calling him close, he asked him to bring his medicine-chest and to hold the candle near him, for the man noticed he could hardly see. With great difficulty Dr. Livingstone selected the calomel, which he told him to place by his side; then, directing him to pour a little water into a cup, and to put another empty one by it, he said in a low feeble voice, "All right; you can go out now." These were the last words he was ever heard to speak.

It must have been about 4 A.M. when Susi heard Majwara's step once more. "Come to Bwana, I am afraid; I don't know if he is alive."

The lad's evident alarm made Susi run to arouse Chumah, Chowperé Matthew, and Muanyaséré, and the six men went immediately to the hut.

Passing inside they looked towards the bed. Dr. Livingstone was not lying on it, but appeared to be engaged in prayer, and they instinctively drew backwards for the instant. Pointing to him, Majwara said, "when I lay down he was just as he is now, and it is because I find that he does not move that I fear he is dead." They asked the lad how long he had slept? Majwara said he could not tell, but he was sure that it was some considerable time: the men drew nearer.

A candle stuck by its own wax to the top of the box, shed a light sufficient for them to see his form. Dr. Livingstone was kneeling by the side of his bed, his body stretched forward, his head buried in his hands upon the pillow. For a minute they watched him: he did not stir, there was no sign of breathing; then one of them, Matthew, advanced softly to him and placed his hands to his cheeks. It was sufficient; life had been extinct some time, and the body was almost cold: Livingstone was dead.

His sad-hearted servants raised him tenderly up, and laid him full length on the bed, then, carefully covering him, they went out into the damp night air to consult together. It was not long before the cocks crew, and it is from this circumstance—coupled with the fact that Susi spoke to him some time shortly before midnight—that we are able to state with tolerable certainty that he expired early on the 1st of May.

It has been thought best to give the narrative of these closing hours as nearly as possible in the words of the two men who attended him constantly, both here and in the many illnesses of like character which he endured in his last six years' wanderings; in fact from the first moment of the news arriving in England, it was felt to be indispensable that they should come home to state what occurred.

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The men have much to consider as they cower around the watch-fire, and little time for deliberation. They are at their furthest point from home and their leader has fallen at their head; we shall see presently how they faced their difficulties.

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Several inquiries will naturally arise on reading this distressing history; the foremost, perhaps, will be with regard to the entire absence of everything like a parting word to those immediately about him, or a farewell line to his family and friends at home. It must be very evident to the reader that Livingstone entertained very grave forebodings about his health during the last two years of his life, but it is not clear that he realized the near approach of death when his malady suddenly passed into a more dangerous stage.

It may be said, "Why did he not take some precautions or give some strict injuctions to his men to preserve his note-books and maps, at all hazards, in the event of his decease? Did not his great ruling passion suggest some such precaution?"

Fair questions, but, reader, you have all—every word written, spoken, or implied.

Is there, then, no explanation? Yes; we think past experience affords it, and it is offered to you by one who remembers moreover how Livingstone himself used to point out to him in Africa the peculiar features of death by malarial poisoning.

In full recollection of eight deaths in the Zambesi and Shiré districts, not a single parting word or direction in any instance can be recalled. Neither hope nor courage give way as death approaches. In most cases a comatose state of exhaustion supervenes, which, if it be not quickly arrested by active measures, passes into complete insensibility: this is almost invariably the closing scene.

In Dr. Livingstone's case we find some departure from the ordinary symptoms.* He, as we have seen by the entry of the 18th April was alive to the conviction that malarial poison is the basis of every disorder in Tropical Africa, and he did not doubt but that he was fully under its influence whilst suffering so severely. As we have said, a man of less endurance in all probability would have perished in the first week of the terrible approach to the Lake, through the flooded country and under the continual downpour that he describes. It tried every constitution, saturated every man with fever poison, and destroyed several, as we shall see a little further on. The greater vitality in his iron system very likely staved off for a few days the last state of coma to which we refer, but there is quite sufficient to show us that only a thin margin lay between the heavy drowsiness of the last few days before reaching Chitambo's and the final and usual symptom that brings on unconsciousness and inability to speak.

On more closely questioning the men one only illicits that they imagine he hoped to recover as he had so often done before, and if this really was the case it will in a measure account for the absence of anything like a dying statement, but still they speak again and again of his drowsiness, which in itself would take away all ability to realize vividly the seriousness of the situation. It may be that at the last a flash of conviction for a moment lit up the mind—if so, what greater consolation can those have who mourn his loss than the account that the men give of what they saw when they entered the hut?

Livingstone had not merely turned himself, he had risen to pray; he still rested on his knees, his hands were clasped under his head: when they approached him he seemed to live. He had not fallen to right or left when he rendered up his spirit to God. Death required no change of limb or position; there was merely the gentle settling forwards of the frame unstrung by pain, for the Traveller's perfect rest had come. Will not time show that the men were scarcely wrong when they thought "he yet speaketh"—aye, perhaps far more clearly to us than he could have done by word or pen or any other means.

Is it, then presumptuous to think that the long-used fervent prayer of the wanderer sped forth once more—that the constant supplication became more perfect in weakness, and that from his "loneliness" David Livingstone, with a dying effort, yet again besought Him for whom he laboured to break down the oppression and woe of the land?

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* The great loss of blood may have had a bearing on the case.

In the last part of the *Athenæum* to hand for December we meet with two consecutive reviews of Livingstone's journals, in the second of which we find the following analytic estimate of the great Traveller's character, which we take to be alike broadly generous and rigidly just :—

His position among explorers is that of Shakspere among dramatists. Bruce, Mungo Park, Caillié, Denham, Clapperton, and the Landers ; Barth, Rohlfs, and Nachtigal ; Burton, Speke, Baker, and Schweinfurth ; all those illustrious men made campaigns in Central Africa, but Livingstone spent nearly thirty years of his life in that country, and nearly twenty in active exploration. Other travellers have died in Africa ; he did more, he lived in it. Like the Romans, he inhabited the countries which he conquered. The others travelled as strangers in the land ; we find them always pushing on towards a certain point, chafing at the slightest delay, cursing the slowness of carriers and the obstructiveness of chiefs, resolved not to yield till their task should be accomplished, yet inwardly longing to return, and disgusted with the country and its people. But Livingtone travelled as the Africans travel, making short journeys, resting a day here, a day there, and when he comes to good quarters remaining a considerable time ; for he was accustomed to regard Africa as his home. There he had married and his children were born ; there was his parsonage hut, and his black, half-naked congregation. When he gave up the missionary life and became an explorer, taking all Africa as his parish, he felt no desire to escape from the wilds to civilized society. It was in England that he suffered from nostalgia. Much of his happiness was due to the fact that he was not, like most other travellers, unable to converse with the natives of the country except through an interpreter. His perfect knowledge of the Sichuana tongue enabled him to acquire other native languages with facility ; and as the Africans possess the gift of conversarion, he found everywhere sources of amusement and interest. When his men were discontented on account of bad fare, or feared the reputed dangers of the road, he called them together, and set down among them on the ground, and reasoned with them gently and kindly, until he had produced the desired effect. There is something patriarchal in the constitution of the Caravan. Its leader is the father of his people and their king. He makes laws and administers justice ; he is responsible for the actions of his men, precisely as if they were his children or his slaves ; while they are bound to him by the same ties as those which untite them at home to their chief. This primitive life has its charms ; and the progress of the white man through an untravelled country resembles a *fête*. The people crowd about him in reverence and awe ; they inquire whether he is a man or a demigod—for the demigods or demons in Africa are white. The sick lie down in his shadow to be cured ; the young women ask permission to touch his strange skin or his wonderful hair, and, when they obtain their request, utter little shrieks, half in fear and half in merriment. Children gather around him, the boys bold and confident, putting out their hands for him to shake, sitting down upon his knee ; the little girls standing at a distance, staring with amazement, and running away when his eyes meet theirs. The old men receive him with calmness and dignity and raising

their withered hands, thank God for having allowed them to see a white man before they die. This is only one side of the picture, it is true ; sometimes the natives are so affectionate that they will not allow that white man to go away till they have received certain keepsakes and souvenirs in the shape of cloth and tobacco. But such hindrances and vexations heighten the enjoyments of discovery. And these enjoyments are not to be despised. It is a supreme pleasure to reach a long-sought-for end ; to tread untrodden ground ; to be able to say, "This country is mine"; to climb mountains, not knowing what may be beyond ; to navigate mysterious waters ; to meditate on glory laboriously earned ; to give new rivers and lakes, like children, the names of beloved friends, who thus also obtain fame and immortality.

Livingstone has rendered it impossible that there should be such another as himself. When he was a young man, as little was known of Central Africa as is now known of the regions round the North Pole. It was the popular theory, as he tells us himself, that it was an uninhabited wilderness ; but when crossing the Great Kalahari Desert, which had repelled all his predecessors, he reached Lake Ngami and the banks of the Zambesi ; when he made his marvellous journey to Angola, and then right back across the continent from the Atlantic to the Indian Ocean, geographers were enabled to define Central Africa as a fertile plateau, with great lakes lying in basins, and rivers escaping to the sea through gorges or ravines in the mountain walls. Livingstone's actual discoveries have laid bare a continent to view ; but it is impossible to estimate the precise value of that impulse which he has given to the cause of exploration in Europe and America. But we do not intend to conceal the defects of his character. He was not a cultivated man ; his ideas on many subjects were narrow and small ; he had a Caffre-like fancy for wearing a gold-laced cap, whether he was in Pall Mall or on the shores of Lake Tanganyika ; it was proved in the Zambesi Expedition that he could not get on with Europeans as fellow-travellers ; the least imputation against his latitudes and longitudes made him frantic with rage, or rankled in his mind ; he would hoard up a geographical grudge for years, and then launch it forth in a despatch to the Foreign Office. But no one is perfect, and sweetness of temper is not a virtue of African travellers. He did much for the cause of humanity. It was an impulse of true enthusiasm which made him become a missionary, and he loved the people for whom he laboured and with whom he lived. His ardent sympathy with their sorrows, his voice crying from the wilderness, has stirred up a new abolition movement, which will not die away till the East African slave trade has been suppressed. That stern, hard-featured man had a tender heart, as is shown by the book that is before us ; from homely sentence and awkward phrase there rises a divine spirit of compassion. To the last he mourns the woes of Africa. Then comes the sublime record of his own sufferings and of his undaunted resolution. There are few, we believe, who will read this work without being strengthened and improved, for it is not only the African explorer who can profit by Livingstone's example. Here was one who strove to increase the knowledge of mankind, and to succour the oppressed. The man of work and the philanthropist are both benefactors of their species ; but that is the best life in which the qualities of each are displayed ; and such, with all its failings and faults, was the life of Livingstone.

With respect to some of the disturbances of temper manifest in the history of Dr. Livingstone, we fancy we find a perfect solution in the following very vivid passage taken from the last of the Rev. Dr. Stewart's articles in the *Sunday Magazine*, descriptive of voyaging along the Zambesi :—

Cool and refreshing slumbers are generally enjoyed in hot countries by sleeping under the open heaven ; and next morning you will awake vigorous and refreshed, unless some of the malarious poison is already mingling with your blood. If so, you are restless and feverish, cross and ill-tempered to your men, and take the most desponding views of human affairs, even to the length of cursing Africa and Africans in one indiscriminate and mighty malediction. And thus you will remain, until by calomel, quinine, and a profuse perspiration, the poison has been expelled and the brain relieved.

The Labour Question and Fencing.

In close connection with the question of labour in this Colony stands the question of fencing. If our farmers had their lands fenced in a way to suit the particular descriptions of farming carried on, it would reduce their labour requirements very considerably besides being of great benefit in many other ways ; but, as with all other new things or innovations, among a people such as that forming our farming population, it is difficult to hit upon any plan by which such a desirable object may be attained within a moderately short period of time. They hate compulsion, or even the appearance of it in any shape, which is to carry with it an expenditure of money ; they are not, as a rule, of a speculative turn of mind, and do not care to risk a hundred pounds with the chance of getting two hundred in return, if there is a possibility of losing a part of the first hundred instead of making a profit ; they prefer rather to tread in the footsteps of their forefathers, and trust to Providence and an open country to keep their stock alive. Still, they are open to conviction, when they have ocular demonstration of the fact by examples, that improved descriptions of stock, and improved systems of farming are and must of necessity be more profitable than inferior stocks and threadbare systems. It was a long time before the bulk of our farmers could be induced to go in for wool-bearing sheep, instead of continuing to breed the old Afrikander fat-tails, and it was only by the force of example and the assurances of persons in whom they placed confidence that they were induced, slowly and very cautiously, to supercede the fat-tails by the wool producers. No compulsory legislation would have effected this with the whole of Africa open to them ; and had any attempt been made to compel them to give up fat-tails for wool, they would have been much more alarmed than they were at the circulation of a report

that they were all to be made soldiers of; and have "trekked" in thousands instead of only in hundreds, as they did for fear of being compelled to do the "roode baatje."

If this be at all a correct notion of the state of things, and if our public men consider fencing of much importance, why should we not try to bring it about by encouragement and example. Our farmers, generally speaking, are not men of large means, who can command sufficient money, beyond their ordinary needs, to expend in enclosing extensive tracts of land; there are many who can, and there are probably many more who would venture upon it, if they could obtain money at a moderate rate of interest, to be repaid by small annual amounts in addition to interest, provided they could be certain that the capital could not be called in more rapidly, nor the rate of interest be increased. Suppose the rate of interest to be 5 per cent., most farmers who would be disposed to try fencing, would in all probability be prepared to pay that rate, and $2\frac{1}{2}$ per cent. more in reduction of capital. Is this not worthy the consideration of the Government? In other countries Governments advance money for great public improvements, such as drainage, plantations, forest-trees, irrigation-works, and so on. The credit of the Government is good, and money on the guarantee of Government might be had for less probably than 5 per cent. interest, and the Government might perhaps aid in other ways without running any risk of eventual loss, such for instance as by obtaining iron fencing materials, &c. The Government would get these much cheaper by entering into large contracts, than private individuals could by each ordering out his own.

The land would be the security to Government for ultimate repayment, but it is not necessary here to go into any details to show how this could be made perfectly safe, further than to indicate that in all cases where fences run between the properties of two or more persons, all the properties should be bound for the money, the proprietors first agreeing between themselves as to the proportion to be chargeable to each.

Sir Philip Wodehouse, if my memory serves me, proposed to Parliament to make a commencement of irrigation-works by advancing money to landed proprietors who would expend it on the conservation of water for irrigation purposes, but at that time there were men in Parliament who had no patience with small beginnings in such matters, and who believed it to be practicable to enter upon some gigantic general system for laying the whole Colony under water at pleasure. Such people do not, as it strikes me, either study the character of the country, or of the people inhabiting it; the people forming our rural population are not *fast* people, on the contrary, they are slow people, and if we desire to do any good with them, we must move along at their own pace.

R.

THE CAPE

MONTHLY MAGAZINE.

Native Education.

II.

"*Mislike me not for my complexion,*
The shadow'd livery of the burnished sun."—SHAKSPEARE.

NATIVE POLICY are familiar words, often heard from the lips of embryo politicians, gushing with enthusiasm to convert the idle Kafir from the error of his way into a plodding, laborious clod-hopper such as may still be found (last remnants of a much-enduring race) in some benighted nook of Wilts or Dorset; and even our experienced legislators are constantly fishing for a definition or explanation of the Governmental policy towards the natives, as if it were of importance that a spick-and-span programme of the most approved modes of native economy should be exhibited from time to time before the eyes of the public, like a collection of domestic remedies or of modern receipts for cookery. The initiatory step towards the introduction of higher and civilized institutions among the natives was undoubtedly the supersession of the arbitrary code of native law by commuting the fines, which went to the chief's exchequer, into a fixed salary paid from the Government funds, and by the reference of all questions to the decision of the British Agent. But those who are conversant with what have proved to be the happy results of the most successful administration of native affairs would be at a loss to point out any well-defined and predetermined plan with all the requisite fittings, planed, tongued, and grooved. The protean aspect of the question is one that forbids so rigidly exact a mapping out of policy as you would expect from the surveyor of your estate or the builder of your country villa. You might as well ask that the internal machinery of the British Constitution,—its latent principles, its rules of practice (the growth of ages), should be reduced to shape and set before the eye in some tersely-expressed clauses of an Act of Parliament.

Putting aside the views of those who represent the finest "porcelain clay of human kind," and deem the inferior races of dusky hue as outside the pale of their delicate sympathies, we may

interpret people's notions of what a real native policy should be, as indicating measures which seek the gradual advancement of the social and domestic condition of the natives; the utilization of their labour; and therewith the peace, comfort, and prosperity of the whole community. Guided by these broad and general principles, the true statesman looks about for such incidental and collateral circumstances as he may fairly take advantage of, to compass so great ultimate objects.

The introduction of several gangs of adult native labourers into the channels of industry specially opened by railway enterprise is accustoming the native male population to associate the ideas of labour and gain, not that they dislike labour *less*, but they love gain *more;* and it seems very opportune to turn to account this disposition to labour, and imprint on the native youth, by sight and by experience, the useful lesson that manual toil is an inseparable adjunct to civilized life. The most vivid impression made on the mind of one of the Fingo headmen (*Veldman*), when he recently visited Cape Town, was the activity of civilized life; or, as he put it, he found the gentlemen all day so busy at their offices —a contrast, striking enough, to the listless, gossiping, lounging life of a gentleman Kafir, with a household of slave-wives doing all the behests of their lazy lord and master.

If we really want to see this busy industrial occupation among the natives generally, and to effect a substantial amelioration of their condition, it is of little avail to give good wishes and to preach the vices of idleness and the duty of toil. Talk is of little use; you may find people, all the world over, ready to do "the good Samaritan without the oil and the two pence;" but it is just the *oil* practically applied, and the *two pence* to refresh the failing energy, that are the only effectual remedies.

To change the habits of a race is a long, slow process, full of difficulties and discouragements; and those who enter on so high and arduous a task may scarcely hope to see much of the fruit of their own labours; but it is equally the privilege and the duty of those who seek to do some good in their generation to help forward the great future that awaits South Africa, by sowing the seeds of true religion, honest industry, and domestic happiness among the debased thousands who wear the frontispiece of our common humanity.

There are two questions which we are compelled to face promptly and earnestly. The one is, "Where are we to look for a steady and increasing supply of ordinary labour?" The other is, "If the native youths are not trained to habits of industry, and to the practice of the usual handicrafts required in civilized life, what else are you to do with them?" Do you prefer to spend public money on police, prisons, and other repressive and protective agencies, or on the workshop and the teachers of handicrafts? Nobody expects a millennium of clock-work industry to result from trade-teaching;

but is there any, not to say better, but conceivable, course open to the State from which a reasonable amount of public good may be expected to follow? The thorough ventilation of subjects such as these is desirable, so as to elicit practical remarks from those who are acquainted with the working of the limited arrangements already made for industrial training.

Si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum.

But if every one is agreed that industrial training is a good thing in itself, and that this country cannot progress satisfactorily without a regular flow of ordinary labour into the various channels of its industries, it is as well to see what would be the probable cost of carrying out on a large scale the training of the hand in the workshop synchronously with the education of the mind and the heart in the day school. Taking the number of native day schools, aided by grants from the public funds reserved under schedule D of the Constitution Ordinance, to be about 100, and assuming that it is desirable as early as possible to attach a workshop under a trade-teacher to each of these schools, first of all, it may be estimated that during the first year, twenty shops could be organized, and the number could be gradually increased year by year, so as to complete the requisite staff of industrial agents in about five years.

If the head of the workshop is a European tradesman, which is at first necessary and desirable, his salary cannot be estimated at less than £120 per annum, so that the fixed expenses of each workshop should be put down at £150 per annum, because the sale of manufactured articles cannot be expected at the outset to do more than balance the cost of materials. Raw lads spoil more work than they finish; and the breakage of tools by inexperienced and clumsy hands is no small item of expenditure. The branches of industry in the boys' workshops would probably be carpentry and shoemaking, to begin with; wagonmaking and blacksmith's work generally would be reserved for those larger agencies, in connection with which the more apt lads are to be employed as apprentices; who, after fulfilling their term of service, would be available as industrial teachers, if required.

The industrial training for girls, would include cutting out, sewing, and perhaps tailor's work, and may be estimated at about £15 per annum for each school, after a preliminary expenditure for outfit.

It is expected that by the end of five years, industrial training would thus be brought to bear on at least three thousand boys up to about sixteen years of age, and a similar number of girls. The more complete agencies required in the workshops to which apprentice-pupils would be attached, would absorb much less public money than the minor stations, because the profits of the labour would be considerable; and the great and practical objects to be secured from

such an enlargement of the present means of industrial teaching may be realized at a fair estimate, by an expenditure of some £15,000 per annum, a sum not insignificant in itself, but not excessive, when it is spent on what may be justly expected to be a reproductive public work.

There is no doubt that a very large amount of apprentice-labour could be utilized in the railway workshops which must be almost ubiquitous both for construction and maintenance.

A plausible objection to this somewhat limited application of the industrial element in the instruction of youth might be urged on the ground that, if it is so necessary in the case of the border natives, it is equally so among the ordinary mixed races settled in the towns and villages, and to some extent also among the agricultural population generally. The principle is already laid down of teaching industry in the district boarding-schools; and the more general extension is not at all superseded by the proposal to deal at first with the larger masses of natives, least able to act for themselves. But, after all, when you bring the horse to the water, you can't make him drink. No doubt there's the weak point of any such plan. Does every apprentice, who has been taught a trade at the existing institutions steadily pursue his trade when he becomes his own master? Some certainly do not. The Old Adam, as theologians put it, is a little too strong for them; the *dolce far niente* of out-and-out savagism is in their case preferable to the daily toil and the restraints of civilized life. But the example of hundreds of their adult relatives acquiring comparative wealth at the diamond-diggings, on railways, and in other spheres, are wonderful incentives just now; and the concomitant influences of a progressive society around them will tend to make labour among the males no longer a choice, but a necessity. Associate the ideas of school and industry together in the minds of the native youth, from their earliest years; put the boys on the road to knowledge, and to manual industry, the one inseparable from the other; and the facilities which a liberal Government offers to the industrious to acquire freehold land, the changing circumstances around them, the shriek of the steam-engine near their kraals, and the spirit of enterprise that jostles out of the way the lazy, blanket-clad savage, will materially back up any direct influences which the development of an industrial system of instruction may bring to bear on those who have completed their training.

Δ.

Remembrance.

FROM THE FRENCH OF ALFRED DE MUSSET.

I knew that I should suffer, and I thought that I might weep,
In daring to revisit thee, thou ever sacred place,
Thou tomb exceeding precious, obscure and hard to trace,
Where buried memories sleep!

What was it you feared, then, in that lonely spot,
And why with outstretched arms, friends, did you round me throng,
When the sweet reaction of an ancient plot
Led me that path along?

There they are, those hillocks, and those blooming heaths,
And the voiceless sand that her steps enshrined,
The lovers' path that still with all our gossip breathes,
That saw our arms entwined.

There are still the fir-trees in their sombre guise,
There the random windings in the valley deep,
And those uncouth friends, whose old familiar cries
Lulled my young soul to sleep.

There are still the groves, with my youth o'ercast,
Like a swarm of bees at my footstep humming,
Happy haunts, sweet waste, where the loved one passed,
Knew ye I was coming?

Ah! those tears that flow, to me so precious, spare them,
Flowing from a heart that so long has smarted,
Wipe them not away, but let my eyelids wear them,
Veil of joys departed.

Of my vain regrets I forbear disclosure
To that woodland echo, witness of my gladness;
Proud that forest gleams in its sweet composure,
Proud my spirit's sadness.

Let him wrap his soul in unsolaced gloom,
Who beside a buried friend bends the knee and prays;
All is life around me here; flowers, that love the tomb,
Take no root in this place.

See athwart the shade the moon its light is flinging;
Tremulous at first, fair queen of night, thou stealest:
Then at once above the dark horizon springing,
All thy orb revealest.

So from out earth's bosom, that the fresh rains quicken,
Day's reviving odours 'neath thy rays are soaring;
Calm and pure as this, from my soul deep-stricken,
Loves of old are pouring.

Whither now do all my life's disturbers rally?
All that made me old mellows in the distance;
Only as I gaze on that much-loved valley
I renew existence.

O all-potent Time, and you swift-flying hours!
Making spoil of all our sorrows and complaining;
Let your footsteps halt, from our faded flowers
Tenderly refraining!

From my heart I bless thee, source of love all-healing!
Not a thought had I that a wound so tender
Bred such keen distraction, or so sweet a feeling
Could its scar engender.

Far from me all idle words and thoughts unmeaning,
Of the grief of worldlings customary swathing,
Wherewith past affections they delight in screening,
Who knew not love's scathing.

Dante, why hast said there is no dejection
Like remembered joys to a heart repining?
From what grief didst learn such morose reflection,
Misery maligning?

Must we then no more believe in light's adorning,
And at once forget it at the night's appearing?
Is it thou, great spirit, through the ages mourning,
Thou, whose voice we're hearing?

No, by that pure torch, whereby my course is taken,
This unholy vaunt weareth not thy heart's seal;
Maybe in this world happy memories waken
Bliss of all most real.

J. G.

A Peep at Paris.

T'was only a peep! We left London on a Monday and returned on a Friday; but, in the interval, what delicious enjoyment had we not experienced! When once we had got over the excitement of landing at Boulogne, and finding ourselves in the hands of the Philistines, we had time to recall some of the incidents of the passage from Folkstone, and laugh over the absurdities indulged in by sober and serious-looking Britons in momentary dread of being taken ill. Stewards and passengers alike are horribly fussy on these occasions, and seem to look upon it as a personal injury that the sea was so calm and the day so bright for us when we crossed over to Paris. After the usual hustling and bustle at the landing-place, and being well stared at by the crowds of outlawed patriots that line the quay on the arrival of the steam-boat, we found ourselves jammed into omnibuses, and rapidly rattled over the roads and streets and pavements, until we reached the railway station. Here we were transferred into comfortable cars, and whirled through a country by no means remarkable for beauty nor variety of scenery, and certainly anything but suggestive of "Sunny France." Not until we reached the valley of the "Somme" did the vineyards and cornfields begin to make amends for the wretched sandy and half-cultivated patches that we had left behind us while skirting the sea coast. It is getting dark before we near our destination, and so we miss the first glimpse of its fortifications. At length we stop at a little platform just inside the walls of Paris, to give up our tickets, or rather to surrender the fourth or fifth page of our little book of *coupons*, and then speed on to the terminus. Here our luggage is swept away by a cloud of porters in one direction, while we and the rest of the passengers by the train are driven into an enclosed space, and made to feel like sheep in a pen, until such time as they choose to release us. By-and-bye, we are allowed to claim our luggage, which, in the interim, has been laid out on tables and duly assorted. After a hurried interview with a *douanier*, whose ceaseless gabble we respond to by a placid "*non non*," and who evidently thinks we ought to say something about "Tabac" (a suggestion which we repudiate with just and ladylike indignation) we manage to satisfy his scruples, and follow our porter to a *voiture*, whither we transfer the indispensable hat-box, &c., &c. All the omnibuses have the names of the hotels to which they belong painted up on the outside, and so we found no difficulty in picking out the one belonging to the "Hotel de Lisle et d'Albion," and taking our places in peace. Our way seemed to lay principally through bye-streets, though we drove along some of the chief boulevards too; and these, with their cafés and shops brilliantly lighted up, and crowds of well-dressed people sitting at little marble tables outside, looked remarkably bright and cheerful. To one just fresh from London and the Cape, the scenes that

passed before us as we craned our necks through the windows, were remarkably dramatic and picturesque, not to say theatrical. It was a long drive to the hotel, and we were not sorry when we were shown to our rooms, and had our numbers taken down, and were booked as members of the house. The *table d'hôte* dinner being over, we adjourned to the refreshment room, and after immensely enjoying the delicately crisp French rolls of the establishment, we sauntered about and thoroughly inspected the novelties of a Parisian hotel, where mirrors and plate glass are introduced profusely into every saloon, and where the art of decoration is not carried to excess as in our terribly vulgar old London. After the day's fatigue and excitement, we scarcely expected to have much sleep, but in this we were agreeably disappointed; and, indeed, had we known the full extent of the hard work cut out for us next day, we certainly should have shut up our eyelids tighter and slept sounder than ever. Next morning early, after a good fish breakfast, most delicately served, we engaged a guide and set off to see the churches, on something like a system. He was a very polite man, and exquisitely civil. The first on our list was St. Roche, and then the church of St. Germain l'Auxerrois, from the tower of which last was tolled the preconcerted signal for the horrible massacre of the Protestants on the eve of St. Bartholomew. Then we did St. Sulpice, a very imposing and grand church indeed; and St. Etienne du Mont, which is near the Pantheon, and has a most beautiful and artistic interior. The pulpit rests on a Samson, beautifully carved, and there are two spiral staircases on each side of the nave, between it and the aisles, leading up to a gallery, which are extremely light and graceful. In this church is the tomb of St. Genevieve, the patron saint of Paris, as also to the memory of Racine, Pascal, and other eminent people who were buried there. The first point of special interest at the Pantheon was the damage done by the horrid Communist balls to the statuary just at the entrance. One figure has two or three fingers off a hand, from another a foot is shot off, and so on. As everyone knows, the nave of this magnificent building is adorned with copies of the frescoes in the Vatican by Raphael and Michael Angelo; there is also a huge painting by Gros. After duly inspecting the interior—chapels, monuments, pictures, and stained glass—all of which, after a time, got terribly mixed up in my dreams, but which I am beginning to recollect now somewhat more distinctly—our little party descended to the vaults, where we heard the celebrated echo, and the effect of which I shall not readily forget. It seems ridiculous to say so, but to my uneducated mind the echo surprised me a great deal more than did the splendid Corinthian pillars and dome of this Grecian temple. This marvellous echo is very cleverly managed. The custodian placed us in a certain position, and then went to a dark corner. Before doing so, he very kindly, and not unnecessarily, warned us not to be alarmed. In the dim distance we saw him raise his arm, and then let it drop again, when such a startling noise

burst forth over and around us as made us fairly jump. 'Twas like the report of several cannons going off just at one's ear. I had not the courage to tell the guide that I was sceptical as to the bit of cane and the piece of stretched vellum that he showed us being able to imitate powder and shot so perfectly, so I hinted it to a French lady who was one of the party. She laughed, and immediately told him, whereupon he gallantly offered to let me try my hand at the echo; but no sooner did I let the cane fall upon the skin than I fled in dismay at the loud report that echoed and re-echoed again and again. Involuntarily I gave a little scream of "Oh!" which "oh!" of course was only too faithfully reproduced in exaggerated tones. For a minute I felt quite ashamed of myself, and then the absurdity of the scene struck me so forcibly—especially as the custodian had a triumphant smile on his face at my incredulity being so effectually put to flight—that I burst out laughing. Again the laugh was mockingly repeated, and again I was made so uncomfortable that I was not at all sorry when the man brought the interview, if I may so term the episode, to an end. He came away from his dark corner, and said something to this effect, "Mademoiselle, the ladies and gentlemen have enjoyed hearing you very much!" And then moving back a pace or two, he went on, "Now, if you please, say nicely, '*Merci*, *Messieurs*, *Mesdames*, *au revoir*, *adieu*, *adieu*,'" all of which I did, to the infinite satisfaction of the echo, who kept on repeating to us his "*adieu*, *adieu*," as we vanished from the Pantheon.

This incident seems small in the telling, but, oddly enough, it made a very powerful impression on me at the time, and the whole scene as I write is now vividly before me. When we went to the "Madeleine," it so happened that a marriage was being celebrated, and so we couldn't inspect the church as minutely as we could have wished, but the ceremony made us ample amends, and was specially interesting to some of our party. The church in reality is a large hall lighted from the roof. The walls and floor are all of marble, most sumptuously and magnificently carved and polished. A very important personage is the beadle, with his gold-laced cocked hat, his silver-topped staff, &c., and who gives himself as much airs, as he struts about the sacred edifice, as if he were the drum-major of a marching regiment. I have no space to tell of all the wonderful things we saw in the churches, but in the sacistry of Notre Dame we were fairly made to gape at the richness and number of the mitres and crosiers, crosses of gold, and precious stones, as well as the treasures of magnificent robes worn by this archbishop and that in the days of old, mostly presented to the cathedral of course by emperors and kings—by Napoleon and Louis XVIII., on the occasion of various grand ceremonies—coronations, baptisms, and so on. Of relics we also saw ample supplies, but they were very seedy, not to say mangy, in their appearance, and certainly had nothing but their sanctity to recommend them. From Notre Dame we went to La Sainte

Chapelle, passing on our way through the Palais de Justice. This building, I need scarcely say, was terribly injured by the Communists, and they were very busy rebuilding and renovating it again. To look into a particular hall, we had to climb up and stand on broken bits of wall, and see masses of calcined ruins, with here and there a step of some grand staircase peeping through the rubbish. A striking mass of ruins was the Hotel de Ville, with its blackened chambers, and imposing air of vastness and architectural grandeur still asserting itself. But in all parts of the city we were coming across buildings in course of renewal, and speaking monuments of the recent and cruel second reign of terror. We must have visited the Palais de Justice just at lunch time, I fancy, as there were so many advocates and judges in their curious dresses stalking about, and the hum of a foreign tongue was incessant; but of course nobody took notice of us, and we went straight on to La Sainte Chapelle. To my mind this is the most beautiful church in Paris. It is gothic, very lovely, full of ornament, and has splendid windows of stained glass, the effect of which combined is simply enchanting. I was perfectly charmed with the purity and simplicity, yet withal the great richness and elegance, of this little chapel, and could have lingered for hours admiring its perfect loveliness; but we had to "do" the churches, and time was pressing us, as well as the guide; so in spite of throbbing forehead and aching feet we plodded on, and tried to feel enthusiasm when we had not strength left to express it. Only a Yankee can keep up this pace without getting tired; and we we were not sorry when a halt was cried, and we dropped into the comfortable chairs of the café where we lunched. After this grateful meal we took a little carriage and drove to the Champs Elysèes. Our principal reason for going there, late as it was that afternoon, was to fulfil an old promise made to certain Cape friends, that we would never visit Paris without calling upon some relations of theirs. The house, being in the Rue de Vilsette, a fashionable and well-known part, just leading off the Champs Elysèes, was easily found, and oh! how different it was to the heavy-curtained and thick-carpeted English home, with its bright polished oaken floors; the little reception saloon all airiness and light, with open windows and Venetian blinds outside, altogether not unlike our own southern homes, with the pervading idea of a coolness indoors, and heat, burning heat, outside! Though entire strangers, we were most warmly welcomed by the two ladies. Naturally enough, they were delighted to see friends of their relative at the Cape, who must seem to them almost out of the world, I suppose.

Their conversation was most interesting, especially that of the younger lady, who was evidently very quick and clever. The details she gave us of the late war, in her own bright way (carrying wonderfully all her French *verve* and vivacity into our quiet modes of English speech) were simply delightful;—of how they had to go to Boulogne-sur-Mer during the siege; how Prussian officers had

been quartered in their apartments; of how much of their table-linen, nicknackeries, &c., were gone or stolen when they returned; as also of their dreadful anxiety all the time they were absent, about a large portrait of her father which was hanging in the little salon we were in. This old gentleman, while alive, had been commandant of the Tuileries; and the picture, I fancy, had been painted there, and presented to the family by the late Emperor. Her brother, too (alas! both of these are now dead) had been an aide-de-camp at the Palace, so, consequently, they knew the Imperial family well, and were of course great Bonapartists. Their anecdotes and little incidents of history in connection with the late Emperor were very interesting; and having lived so long on the spot, these lively ladies could not tell us enough of all the wonderful and vast improvements effected in Paris by the third Napoleon during their residence. While talking of the various consequences of the siege —the expensiveness of things generally, rent of houses, &c.—they told us casually that the rent of their modest suite of apartments, consisting of two or three reception rooms, and about seven or eight rooms, altogether was 8,000 francs annually, or about £350! As we were such special visitors—colonists, in fact, from that far-distant, and, to Parisians, but little civilized bit of the great African continent, the Cape (a land which one constantly finds more or less associated, in the minds of the good folks at home, with lions and tigers, and savage warlike races of coloured men, crowned with plumes of ostrich feathers; and which will always continue to be so while we are so modest, and will not boldly advertise our merits in the markets of the world) some wonderful old Bordeaux was iced and tapped for our special behoof, and which bit of attention we duly appreciated.

But there is yet much to be done to-day, so we must bid these kind and charming ladies farewell, and leave them, feeling we have not only gained pleasure but many little bits of information from the visit. Travellers are very fortunate in meeting so many nice people all over the world; and our only regret must be that it is impossible to retain all these acquaintances on our permanent list of friends. *Mais revenons a-nous moutons!* After dinner we made up a large party, and all went to the opera together; and though not enjoying what one generally goes to such places for, still we had very great fun. We were placed about as near the ceiling as was possible; and to our uneducated senses the singing was poor and the acting execrable; but there were some comical little bits of bye-play to be submitted to before we got home again. First of all two funny little wooden footstools, of no earthly use, and not in the least comfortable, were poked in through the little box-window, and we had the pleasure of accepting and paying for them. Then the bouquets were distributed on a striking scale. After every telling scene about a dozen bundles of flowers, really extraordinary in size, would be sent flying on to the stage in the most helpless and haphazard style, flopping on to

the floor most inelegantly ; while the impudence of the *claqueurs*—a body of men who are paid to lead the applause—was something astounding in its effrontery. Every now and then there was a simultaneous burst of loud applause from a lot of people in the front row, and they always clapped their hands at a given signal from their leader, whether the part was worth applauding or not. To the actors themselves such paid-for praise, after a time, must be very tiresome and monotonous, and the *claque* of Paris has become a perfect byeword. There was, however, no sleep for our wearied eyelids yet awhile, for when we got back to our hotel, a *resumè* of the day's proceedings had to be gone through for the behoof of those who had stayed at home, and we had to fight our battles over again. These included our drive to the Champs Elysèes and the churches we had "done." We had also seen the "Place de la Concorde," and the "Arc d'Etoile," and had been to a Parisian opera-house, and altogether had got through a great deal of hard work in the course of the day ; and naturally, walking about so much, we got a very good idea of the city, its buildings, boulevards, &c., &c., and I only wish I could convey my impression as clearly to others.

We had also to listen to the discovery made by the head of our party that the gentleman seated next him at dinner had had a brother killed in the Kafir War, and that his name appears on a monument in St. George's Cathedral, and that he was quite delighted to meet with real live colonists who could give him all the information he required at first hand without proving to be a savage.

The next morning (Wednesday) found my *compagnon du voyage* completely knocked up. However, in pity to my youth and inexperience, he started forth bravely enough when the punctual guide came to fetch us. We passed through the gardens of the Palais du Luxembourg, which are very prettily laid out, and dotted all about with statues, &c., &c. As my chaperon began to feel fatigued very soon, we only took a hurried survey of its fine picture galleries, and we merely trotted through the Louvre, where I could cheerfully have spent a fortnight alone. As it was, we feasted our eyes on its fine collection of masterpieces in painting and statuary, the best of these no doubt captured or stolen in war. Among the statues, we were particularly pleased with the famous Venus of Milo ; but what filled us with amazement was watching the queer old women and students, who were copying away for bare life and their living perhaps, in the well-lighted galleries. Many of these young people may one day prove to be full of genius, but at present they invest the best paintings with a perfect barricade of easels, and paint away with the greatest seriousness. Some of the faces are perfect studies : some weary and discontented, as if disgusted with their day's work. Courage !—poor fellows, paint on, the afflatus will come yet. Others, on the contrary, seem perfectly self-satisfied with their proofs of skill, and give themselves such airs, as if the Guido just

copied was well enough so far as the idea was concerned, but the masterly carrying out of the conception was due to his French pupils! For excellence in every way we gave the palm to a beautiful painting by Rosa Bonheur, called "Oxen Ploughing." The figures seemed instinct with life and motion, and are in some respects more picturesque, because more true to nature, than the sleek stags and well-groomed horses of Sir Edwin Landseer. In my absorption over this picture, I nearly fell over an easel placed near it; and in glancing at the cause of my mishap, I was struck with another of my live pictures—a little, plain, old woman, with corkscrew curls and a large hat—about as unpoetical and weird a little subject as you can conceive. Perched on a high stool, this commonplace old soul was making a splendid copy of Rosa Bonheur's painting; and every now and then she would scramble down, hop up close to the picture, take a narrow look at the oxen, and then, with an amused glance at me from her bright and inquisitive little eyes, be back again up on her stool as nimbly as an elf, painting away so deftly and *wholesoullily*, that you felt quite a respect for the clever old fright in spite of her figure and hat. But one more look at Paul Veronesi's large and wonderful picture of the "Marriage in Cana," and then we must go. So, reluctantly leaving the vast combination of glorious inspirations and creations on canvas—by Tintoretti, Rubens, Correggio, Claude Lorraine, &c., &c.—we were forced to return, and let my chaperon rest and get well for the next day, when we planned to go to Versailles.

After a mid-day rest some of our party sallied forth by ourselves for a lazy ramble. It struck us, when we came to the cab-stand opposite the Madeleine, that we might manage a quiet little drive to the Hotel des Invalides. Accordingly we hailed a *fiacre*, and very cleverly, as we thought, arranged with the driver to take us by the hour, and not by the "course." When the cab stopped before the place the gates were closed, and we had the pleasure of gazing very hard indeed at the outside, inasmuch as we were debarred from going inside on a Wednesday to see Napoleon's tomb. Here was a pretty "sell," and the vagabond driver enjoyed the joke a great deal more than we did. Our French failed us, or we should have treated him to a good scolding, but we gave vent to our feelings in very strong English, and this probably did just as well, so we quiety went back again to the hotel by another route, crossing various fine bridges, and seeing quite a different part of the city to what we had seen the day before. As we drove slowly along, we were struck by the words "*Liberté*, *Fraternité*, *Egalité*," and "*Proprieté Nationale*," conspicuously painted and stuck up over churches, theatres, and garden walls, where, doubtless, the Imperial Crown and Cipher had also been placed in successive revolutions. On our return, we could not resist the pleasure of doing a little shopping in Paris; but we were quite unprepared for the heat; for, although still early in the season, we felt it to be quite as hot as on any broiling Cape

summer day—say after a south-easter has been blowing for some days previously. Cheerfully and thankfully I was glad to accept the shelter of an enormous umbrella that one of us had brought out with him, and felt almost as if I was being baked in Adderley-street. The shops are beautifully kept, and the relation of the sexes reversed, the men serving and the women keeping the books; and as the chestnuts in the squares and boulevards were in full bloom, looking so fresh and beautifully cool, we sighed for the days when Cape Town would be similarly blessed and adorned. Undoubtedly the sanitary arrangements of Paris are splendid: everywhere it seems so clean, and there appears to be such an unlimited supply of water at command for flushing the streets and settling the dust. Not a bit of paper or orange-peel is suffered to lie on the asphalte for a minute, as a troop of scavengers are always clearing them away. Though the streets looked cool, the heat was intensified by the glare from the great white buildings and the pavement. While my friend was lying down, I amused myself by looking out of the windows, and staring at the lively scene below. Constant traffic, of course, both vehicles and walkers of all descriptions, from open carriages, with gorgeously attired Parisian dames, and little Victorias, with dandies so effeminate that they allow themselves to be driven, down to huge vans and wheelbarrows. Among the street-vendors, some in their blue blouses, vividly recalled horrible visages of Communists and Red Republicans in the illustrated papers; and then the dry nurses or *bonnes* looked funny walking about without any covering to their heads except small muslin caps.

In the evening we went for a stroll to the Palais Royal, a sort of bazaar and arcade, for the sale of sham jewellery. What a dazzling scene it is when all is lit up at night! There are over two hundred lamps in the arcades, and each shop is most brilliantly lit up as well. One gallery, at any rate, seemed to be one blaze of flashing lights, with an unbroken line of shop windows and mirrors, filled with sparkling diamonds and all sorts of bewitching *bijouterie*. People say that no shop in the Palais Royal comes up to some of our particular shops in London. Be this as it may, certainly in this case "many littles make a muckle," and the cramming of so many shops in a limited space enhances the brilliant effect. Most of the jewellery is imitation, but the law compels the vendors to mark which is sham and which is genuine, so that the buyer is not cheated. We had various little presents to buy against our return, and I never found it so difficult to choose pretty things, the contents of each window seeming more enticing than the last. Add to all this glitter and sparkle, crowds of well-dressed people promenading about or sitting at little marble tables before the cafés drinking "*Café noir*," and you are fain, as the night was mild and fine, to go and do likewise, and consider yourself quite a Parisian. We flavoured, however, our coffee with milk and not with spirit!

Punctually at ten next morning our trim little guide drove up to

the hotel with a nice open carriage to carry us to Versailles. We were soon driving along the banks of the Seine, which are now bordered with very young trees, in the place of the beautiful shady trees cut down during the siege. All the way to Sevres we passed through populous suburbs. Just before reaching the porcelaine manufactory our guide pointed out a house where King William had stayed. Indeed, all the way he was pointing out spots of vivid interest in connection with the late war. The manufactory is held in an old tumble-down chateau, prettily situated on a slight eminence surrounded with lovely foliage; and what it owed to age was not improved by the damage done to it during the siege, when many of the houses in its neighbourhood were bombarded by the Prussians. From its "stoep" we saw the new manufactory now in course of erection, and a grand large building it will be when finished. The exhibition rooms were crowded with such a lovable collection of rare and valuable things that made your fingers itch to steal them for their beauty. Oh! the lovely Sevres china, and above all, the dainty paintings on porcelain. Soon we were at a loss for adjectives to express admiration. One painting especially thrilled me. It was a Madonna on porcelain; and I envy the fortunate possessor of so much beauty and tender feeling. Every now and then we heard startling revelations as to the value of this or that special article, some of them reaching as high as thousands of francs each, or as low as 350 fs. for a single plate. The guide pointed out a dinner service that had been expressly made for the late Emperor for the Palace at Fontainebleau. It had not pleased him; but the colour and design, chiefly of hobgoblins, were most curious and peculiar.

Then the vases, so choice and expensive; and such *ravissante* little cups and saucers, out of which to drink intoxicating tea. One must see this sort of thing to appreciate the delicacy and flavour of French art when patronised by the State.

But our horses are getting restive, and we have a long drive yet to Versailles. The avenues of chestnuts are very pretty, and we seemed to drive up a very long one right into the grounds of the Palace. We went over the two *trianons*, or private boxes, before going to the Palace, and had a good specimen of the taste and extravagance of Louis XIV. when he was determined to leave his mark upon royal properties. The Grand Trianon is a handsome house, but it has nothing palatial about it except very sumptuous fittings. Among the apartments there is one called the "Salle de Malachite," because of a large and lovely malachite basin or font in the centre of it. It also contains four large vases, with the flowers of Europe, Asia, Africa, and America beautifully painted upon them. We had pointed out to us in another hall the exact spot where Marshal Bazaine stood during his trial, as well as where his judges were seated. The Petit Trianon was built by Louis XV., and it is very pretty, but a much smaller villa than the other. Here Marie Antoinette was fond of staying, and playing at being a dairy-maid

or some other rustic character. The grounds attached to it are very beautiful, and well laid out. In one of the bed-rooms, most sumptuously furnished, my eye caught sight of a splendid Watteau quilt, from which the Imperial "N" had been ruthlessly picked out. These letters, worked at the foot of the quilt, can still be traced on the silk, in spite of the vulgar *Proprieté Nationale* now disfiguring it. So much for the Napoleon dynasty. In the *Museè de Voitures* we spent an amusing quarter of an hour glancing at the queer collection of old-fashioned carriages there assembled since 1800. Some were great gaudy yellow affairs, in the style of the Lord Mayor's coach, and yet handsome in a way, having purple violets painted in garlands outside, and fitted up with white satin linings and trimmings of gold fringe; others, again, looked like low tiny sledges, all gilded, and with tinkling bells; and the latest of them had been used at the baptism of the Prince Imperial, and who knows what the next accession will prove to be?

Versailles itself is an enormous palace, with room after room so grand and beautiful and imposing, with acres of painted canvas, and halls that are simply astonishing from their beauty and size. What a place for moralising in, and contrasting the changes of fortune to which it has been witness! Here Louis and Napoleon and the Prussian William have held their courts successively, and the mind is in a whirl trying to recall the leading incidents connected with its history. Little did Ary Scheffer or Horace Vernet dream that the finest creations of their pencils would one day soothe the sick fancies of an hospital ward; or that the battle scenes on the walls should be derided and laughed at by the very Prussians whom the French in their hearts have always looked down upon and despised. As we wander down these well-lighted saloons, we thank our God that our pride and vanity are never checked except for our own good; and hope the future career of *La belle France* may prove a lesson and a warning to all nations who may happen at present to be puffed up with the windbags of national glory. The gardens outside are very formal, but the statues and fountains and extensive terraces are peculiar, and well worth a longer visit than, unfortunately, we were able to pay them. After a capital lunch we drove back by way of St. Cloud, but of course we saw nothing but the ruinous effects of war, and should like to have been saved the sight of recent graves and evidences of the late struggle for supremacy on the Rhine. In passing under a bridge, we came across some ghastly inscriptions over the dead buried in its neighbourhood; while house after house, and villa after villa, seemed empty, and ruined, and desolate, bearing marks of cannon-balls over their porticos, and not a few hard hits on their ragged fronts. The view as you descend to the Bois de Boulogne is beautiful and extensive, but the suburbs are somewhat tame when you come nearer.

On crossing the Seine again, we went through the Bois de Boulogne, the Rotten Row of Paris, and timed our visit so well,

that at that hour (five o'clock), the park was crowded, and full of prancing cavaliers and grand equipages with occupants in startlingly and distractingly brilliant toilettes. The scene, in fact, was exceedingly gay, but the pace was very slow; so thick was the throng of carriages, that we despaired of reaching home in time for dinner and the play, as previously arranged in our programme. In the meantime we enjoyed ourselves amazingly, and I would not have missed the sight for a good deal. There were comparatively few equestrians, but row after row of vehicles of all descriptions. "Comparisons are odious," so I shall only say that I fancied the ladies were not half as pretty, the gentlemen not half as handsome, and the horses not half as splendid, as those at Hyde Park. One got so packed in, as it were, that we trotted along but slowly, moving with the stream; but we were not sorry that we had after all gone that way, for we saw one or two novelties. There had evidently been a grand confirmation during the day. Carriage after carriage passed with young girls in their white dresses and veils. Where there was one girl in an open carriage with two or three ladies, the contrast between her pure white and their "all the colours of the rainbow," was much marked. It seemed so strange seeing them driving about that way. We even met them walking as we neared the city; but I believe it is quite a custom with the middle-classes for a wedding party to adjourn there or to the Champs Elysées, the bride and bridesmaids all in their bridal attire. They evidently do not shrink from being the observed of all observers. We drove quickly when we came to the Champs Elysées, through the Place de la Concorde, &c., but for all that found we would be too late for the special "Grand Hotel" dinner promised us. After dressing, we went to the Palais Royal, where we got a less extensive, though still characteristic French dinner. What with the number of courses, and the novel *hors d'œuvres* between, I was thoroughly tired of it, and came to the conclusion that it was very hot and tiresome, and not worth the pains we gave to it.

We had good seats at the theatre, and enjoyed it very much; it was very different to the opera-house. This "Théâtre Francais" was once famous for having the purest Parisian spoken there, and for having only classical or the highest order of dramatic performances. It is still the best theatre, I suppose; the acting was splendid. We saw Racine's "Andromache," and a little comedy of Molière's, the founder of the theatre. When we reached the hotel that evening, we found the big gate-doors shut, and everything shut up and locked away, so we experienced for the first time—may it be the last, the sensation of going to bed supperless.

And then—oh then! next morning we had to say good-bye to Mr. and Mrs. T———, to the Hotel de Lille, to the good-looking waiter, the polite little guide, and drive away in the beautiful morning through the clean and beautiful streets to the railway-station. It seemed very hard to have just tasted the pleasures of that "pleasure-

loving city," and then have to leave without enjoying them to the full. But we were only promised a peep. A peep we certainly had; and, as we opened our eyes to the widest, we saw more in one week than others managed to see in a fortnight. Let us therefore rest and be thankful.

M.

A Cape Town Newspaper in 1830.

A COPY of the *Commercial Advertiser* of 16th June, 1830, in excellent preservation, Government stamp and all, forwarded by a friend, interested me so much that I venture to essay a slight sketch of its contents, only regretting that space forbids more lengthy extracts. It will be found that wants which existed in Cape Town then have never yet been supplied; that correspondents wrote quite as angrily as now; whilst a feeling akin to sorrow is engendered by a perusal of the list of names appended to advertisements, subscription lists, &c.,—names whose owners have lived within the memory of many of your readers, honoured and loved; and last, though not least, that of the editor himself, John Fairbairn.

The style of the paper is much the same as those of the present day, the same funny little marine monstrosities heading the shipping advertisements—of which, by the way, there are only three, and the biggest of these the bark *John*, 200 tons, which is to be "dispatched for London, with liberty to call at Cork," solicits passengers. Next in the way of advertisements come the auction sales, wherein jewellery figures rather largely as "select investments," consisting of "strings of coral and other beautiful ornaments for ladies." One gentleman, availing himself of a friend's notice, announces that he will offer for sale at the same time "1 trunk handsome necklaces." Finery was apparently in request in those days; but when we read of "six pairs camel hair shawls" being submitted, we are glad to think it was June, '30, and not February, '75, that these were brought to the notice of a discerning public. Again, we come upon Thibet shawls and scarfs, appropriate to the season.

The population must have been a thirsty one too for its size, judging from the quantity and quality of wines advertised. "Chateau Margaux," "St. Julien," "Champagne," and "superior old Cognac" find a place, and also "16 hhds. superior pontac, *brandied*;" but this must have been to suit the European palate, as it is described as "ready for immediate shipment." The sale of this latter must have been considered rather important, as refreshments would be provided to stimulate the bidders.

In an insolvent estate, which is to occupy two days, we learn that

there will be sold "the following movable property and slaves." After specifying the former, comes :—

1. Abraham of this Colony, aged 39 years.
2. George, do. „ 16 „
3. (2) Abraham, of Mozambique, aged 50 years.
4. Robert, of this Colony, aged 6 years.
5. Johannes, do. „ 5 „
6. Regina, do. „ 50 „

Poor little Robert and Johannes, I hope they got good masters. If alive now, they must be pretty old fellows; but the emancipation would come shortly after, and as an inkling of it must have existed at that time, they were doubtless knocked down for a mere song.

The Fine Arts are to the fore in the person of the church. "The Rev. J. Sevencroft Blomfield, National Gallery, begs to intimate that he will be in Cape Town One Month, for the purpose of Painting Portraits, Family Pictures, &c., &c.

Prices: Family pictures, £50; portraits, every size, £25.
Miniature or cabinet, £25; cabinet sketch, £10.
Cabinet profile, £5; sett (*sic*) of four landscapes, any size, £80.
Any subject, single picture, £25.
☞ Lessons in Oil Painting, One Guinea each."

If he got much work to do during his month's sojourn, he would not have had much time for the pupils, who would need to be apt to derive much benefit from so limited a course of instruction. The reverend gentleman's charges appear high, and we have much to be thankful in 1875 for Barnard and Bruton.

Literature is to be found in what are termed "pocket classics, neatly bound in linen" and in calf, where "Beattie on Truth" is linked with "Sterne," "Grace Abounding" in companionship with "Humphrey Clinker," whilst "Horne's Commentary on the Psalms" and "Robinson's Scripture Characters" are lovingly associated in the pocket classics with "Tom Jones" and "Joseph Andrews."

The only other notice of books for sale is announced through the stern voice of the law, notifying that a sale will be held of a library "taken in execution by the messenger of the Judge of Police to satisfy certain warrants." The literary owner was probably in trouble, as many of his poor brethren have since been.

Entertainments would seem then, as now, to have been at a discount—the only hint of any such, being "Lectures on Phrenology," and a notice from the proprietor of Concordia Gardens that "in consequence of certain misunderstandings respecting the nature of the establishment . . . arrangements have been made which will not admit of individuals resorting thither promiscuously." The "individuals" referred to would find that the proprietor had reserved

to himself the right of returning money at the gates of Concordia Gardens in future, and a stop put to their "promiscuous proceedings."

The Ladies' Benevolent Society return thanks for the "liberal support" they have received; but, judging from the amount of the donations, they must have been satisfied with very little, or money went much further at that period than it now does.

One envys with a sigh the good fortune of gentlemen who, in 1830, might have houses "furnished or unfurnished," or "might be accommodated with board and lodging on *very moderate terms;*" all they had to do was to "apply on the premises." The gentlemen are probably no more, the houses turned into stores, whilst the moderate terms have taken wing and flown heaven knows where.

The gem of the paper, however, is its leader, chatty, learned, bristling with point and original idea. Well, one would not be surprised to find it in the *Spectator*, alongside of one of Addison or Dick Steele's genial productions. Is there no complete file of this paper? A selection of articles by the same hand would deserve quite as neat a calf binding as any of the pocket classics above mentioned.* The article itself is too long to introduce here, and it would be a pity to mangle it into disjointed extracts. I forward it herewith for publication if you think fit.

The correspondence is varied; one gentleman, signing himself "Honestus," has been trying to get up an "independent paper," in shares of 50 Rds. each. His scheme does not appear to have met with success, or the approval of the editor of the *Commercial Advertiser*, who has evidently hit Honestus pretty hard in some previous issue, so as to make him cry out pretty loudly at being called an "unfortunate varlet," he protests, however, he is not at all angry, but feels rather better for it.

"The education of the people" draws forth two pretty lengthy communications, one of which contains the following anecdote: "I reeollect being present at a public examination of one of these schools† when some of the scholars solved with considerable dexterity some question in the Rule of Three, and upon the same being shown to one of the members of the District School Commission, he exclaimed with great animation and emphasis, 'Mooi muitiplicatie, mynheer' (Anglice, fine multiplication)."

As in the present day, coroners' inquests seem to have been demanded; and were not to be obtained; from the letter on the subject it would appear that the matter had been previously agitated. But now a soldier of the 72nd is murdered at Wynberg, and a "female Hottentot" near Kalk Brandery, who lies some days before

* The suggestion of our contributor is one which should be acted upon. Scattered through the leading columns of the *South African Commercial Advertiser* during a period of thirty-six years, gems of thought set in choicest language may be abundantly found worthy of comparison with the very best among the English classics. We know of no one so competent to undertake this work of "diamond-digging" as Mr. Fairbairn's son, the present clerk to the Legislative Council.—Ed. *C.M.M.*

† Provincial Government Free Schools.

an inspection takes place, or any inquiry is made, and for all the writer knows, may be lying there still, so that he thinks it high time some steps were taken.

The bakers, price of wheat, and regulations for washing-women occupy the minds of corresponding housekeepers and economists, and end this cursory glance at the original matter of the paper. The remainder is made up of law reports from the circuit court, George Town, where much litigation would seem to have gone on under the presidency of Mr. Justice Menzies, there being no less than twenty-two civil cases mentioned.

The judge of police had an easy time of it that week, only two trifling cases being reported between the 11th and 14th.

The paper is printed in English and Dutch, in good clear type, whilst the general arrangement seems to be the model on which most subsequent publications have been built.

An abler pen than mine would have done more justice to the subject, but I shall be glad if my attempt will only induce others who may possess the material to give us some account of the current colonial literature of the early portion of the present century.

C. H.

[The following is the leading article referred to above.—Ed.]

A Lady complains that among the instances of heroic patience given in a late Paper, from her sex no example was selected; at the same time observing very well that as the Ladies are oftener called upon to exercise this virtue, so it is admitted by them all that they excel in it. The truth is, we had not space to do them justice, otherwise we might have given the whole "*History of patient Grizzle*," who may be placed, as far as any thing profane can be placed, by the side of Job himself—whose wife, by the way, has been shockingly misrepresented by our translators. She did *not* say, "Blaspheme and perish," but "Wilt thou offend God and die?" Her meaning was—"Be patient, my dear husband; this is the finger of Heaven—submit, and live." His answer was a little peevish,—"Do you talk like a foolish woman?" but he was vexed at the moment, and needed no advice. His meaning was, "I knew you would not speak like a foolish woman; but prithee be silent, and you shall see how well I can suffer." This we call putting things to rights; at the same time it is provoking to think what one's memory may suffer for three thousand years before any body has the sense to do us justice. Job's wife has stood all that time by the bitter side of Lot's wife; while his masculine friends, whom—but we must keep temper. These gentlemen came to condole with him (such friends on such occasions are desired to spare us their visits of condolence); and they made most philosophical speeches, the drift of which was that the suffering saint should console himself with this consolation, that—*he had nobody to blame for his misfortunes but himself.*

Our Correspondent will see farther, from the letter of Honestus in to-day's Paper, that some puny biograper has been applying his microscope to the laurels of Newton himself, with the hope of discovering a withered leaf. When Newton in his old age saw his manuscripts con-

sumed he was fully aware of the irreparable loss which not only he but the whole world had sustained; much greater than that caused by the burning of the Alexandrian Library—if it *was* burned, which some doubt also; and his love of science and his benevolence being equal to his other great qualities, his regret and sorrow afterwards were doubly becoming and graceful. And from this second elevation we get a clearer view of the grandeur of his first act in not allowing a single spark of resentment to fall upon the unconscious author of the mischief. But Honestus would turn his glory to his shame, and argue from the *goodness* of his heart against the *strength* of it. All of which comes of being a little wrong-headed.

Having mentioned Biograpers, we may, with your permission, throw a shell or two amongst that pernicious generation. It was said long ago, that none but a Phidias should attempt a Jupiter; but the maxim had too much sense in it to be long acted upon; besides, if it were easy for a man to know himself, "*gnothi seauton*" * says Plutarch, would never have passed for a divine oracle. Accordingly, when a great man dies, and before his ashes are cold, out comes a Quarto Life of him by his private Secretary, or some other supernumerary Valet de Chambre, to whom he is no hero, conveying some prodigious points of the private history about the dress and undress of the illustrious defunct's understanding. This was the unhappy lot and second death of Fox and many others, not to mention Leigh Hunt's profanation of Byron, or the unsuccessful garment of embroidery and many colours made for Sheridan's Ghost by Thomas Moore. Of this last it was observed by some one to his present Majesty, that Moore had *murdered* Sheridan! "I did not hear that before," said the King, "I only heard that *he had attempted his life*." Mallet, writing the life of Locke, forgot that he was a Philosopher; so that when he was hired to give a history of Marlborough, he needed to be warned not to overlook the fact that the Duke had been a General. We recollect a friend of ours being importuned to allow his portrait to be taken by a young Artist, whose charge was only Five Guineas. "If he would *give* me Fifty," said he, "I would not allow such a fellow to look into my eyes!" To these we may add some words put into the mouth of Dr. Johnson, not his own but much in his character: "I understand," said a friend to him, "that Mr. Boswell will give us an history of you when you are gone." "Sir," exclaimed Johnson, "if I thought that James Boswell intended to write my life, I would be inclined to anticipate the measure, by taking his."

It has been often said (had it been true it would not have been said so often,) that all great men have had great faults; while in truth such faults are only looked upon as great because they belong to them, little men having many more and much greater, if littleness itself be not the greatest fault of all. But nobody heeds them. The bark of the ancient gigantic oak appears very rough to our eyes; but apply a good magnifier to the outer case of a dwarf medlar or crab tree, and you shall see such rents and

* "Gnothi Seauton"—Greek, pure heathen Greek. It means "*know thyself*." And here we must pain your ear with another piece of abominable injustice done to one of our friends. In ancient Greece there were seven sages, distinguished above all others for their wisdom; and these excellent men, out of kindness to you and us, condensed all their wisdom to a single sentence: only think what money and time it would save if the moderns would do the same! One of them gave the above maxim as his legacy to succeeding times, and the world envying his fame gave it to Apollo, the God of wit and music, and poetry, and many other fine things, so that it passed for a divine oracle as Plutarch has remarked!

contortions and nests of—grubs, as will make you laugh. When Gulliver was in Lilliput, his friends told him that his skin was covered with huge scales; but when the king of Brobdignag took him up in his hand, he declared that his cheeks, madam, were as smooth as your own.

So much does character depend upon the spectator. If his eye is evil, and small of course, he perceives nothing but sharp angles and deformities; if it is good and large, and full of light, he sees fair proportions and beauty. And if you are not tired quite of such chat, here is another story to illustrate this remark.

An ancient statuary had succeeded in producing a Venus that bade fair to rob all mankind of their senses. Mind and heart, dignity and tenderness, Heaven and earth so happily combined, and swimming in an atmosphere of dazzling purity and sweetness!—In short it was a very pretty statue, and the whole critical world was ready to burst with envy at not being able to find a single fault in it. But no; there she stood smiling on the delighted crowd, who could not help bowing and smiling again, becoming more beautiful themselves as they gazed upon her beauty. At last a wandering *cobbler*, who had come to town, it is presumed, to purchase leather, or to get his awls or his paring knife re-set, took the goddess to task: and after a most scientific investigation discovered and proclaimed to the world that—*the latchet of her sandal was wrong placed!*

Patient Brethren, as the parson said when announcing the twenty-third head of his discourse, you must submit to another anecdote, told by Dr. Franklin of a humorous friend of his. This gentleman had one very straight and well-shaped leg; the other was remarkably crooked. Besides the ordinary uses to which legs are put, he derived from this a peculiar one. When a stranger was introduced to him he narrowly watched which of the legs drew most of his attention. If the handsome one, he set his new friend down for a gentleman and a superior fellow. But if his small bead-like eyes, after twinkling for an instant under his shallow forehead, fastened on the deformed leg, he voted him a grub, and a wooden spoon, and treated him accordingly.

Thus you see, Madam, that our friends, mankind, are not altogether destitute of observation; and although people who write books, particularly biography, often put forth a great deal of feeble nonsense, which, craving their pardon, the most perfect good breeding does not compel us to read quite through; yet there are many whose good opinion is a source of blameless pleasure, and which, if it does not make you vain, will often have a very happy effect on your life and deportment. And although we have not the honour to know who you are, yet we infer with certainty from your letter, particularly where you pay us so many flattering compliments, that you possess high accomplishments and as much penetration as becomes a woman, together with a singularly correct judgment. In those particulars to which you object (we wish they had not been so many—but that's a secret) we shall endeavour to improve; and although we cannot turn this Paper into a Lady's Magazine, yet with your assistance we shall try to set the virtues of your sex in the most attractive point of view; and if the other race of human mortals don't mend, and that speedily, you shall be placed decidedly at their head.

A Trip through Kafirland.

CONTINUED.

Just before outspanning that evening we witnessed a curious formation of two rivers' channels. Descending from the higher land we entered a sort of neck with a river on the right and left. They ran parallel for some distance, and then disappeared from our view round a rocky prominence; but the remarkable feature was that the river on our left was elevated some seventy or eighty feet above that on our right, and it reminded us of the appearance that some of the canals at home present, sometimes many feet above an accompanying road or river. On rounding the bend, we perceived that the left hand stream took a turn to the right, and after forming several small rapids and cascades, ultimately fell into the Ingu, of which it was a tributary. At its junction a very pretty waterfall was descried, and we determined to form our camp as near as possible to this spot. Our tents were pitched close to a small Bastard farm, the owner of which came with sundry baskets of vegetables which were most acceptable. As the daylight waned and the camp fire became more bright, our peace of body was considerably marred by the attacks of myriads of inimical mosquitoes. These little plagues became so intolerable that we found the only means of avoiding their onslaughts was to sit in the smoke of the wood fire. For some time we endured this, but at last found that the "remedy was worse than the disease," and that ere long we should have to undergo a process of "kippering" which bade fair to rival the adepts of Finnon Bay. As it was our skins were even then like unto "beltong," so with a parting glass we made for our tents earlier than usual, and there escaped the ravages of our persecutors.

We were up betimes, and crossing the tributary stream pushed on for the Tsitsa River some twenty miles off. An amusing accident occurred as we were journeying. Two or three of our party detached themselves for the purpose of shooting some pauws that were seen in the distance. Whilst stalking these wily birds, A—— discovered in the low grounds to our left what appeared to be a couple of oribés. Our thoughts now naturally turned from the birds to the more noble game, and we set about circumventing the fleetest of African bucks. We had to proceed with great caution, and after dividing our forces we stealthily approached our intended prey. It was with great difficulty, by dint of crawling and sneaking along the grass, that we ultimately came within shot, and we vied with each other in endeavouring to become the hero of the day. Almost simultaneously we raised our pieces, but ere we pulled trigger we gave one last searching glance to see that all was right, and also where exactly to place the fatal bullet. From looking at the game we looked at each other, and then at the game again, and

with one accord we burst into a laugh both loud and long; for lo and behold our swift and graceful bucks had given place to two small "porkers!" which had strayed from a Kafir kraal, that until now had remained unnoticed on the side of an adjacent hill. We were very nearly giving these innocent and sweet little pigs the contents of our deadly weapons, but the joke at our own expense was too good to mar its effect by wanton slaughter, so we trudged wearily back to our horses, which had been left some long way off. At first we determined upon keeping a religious silence about our sporting transactions, but finally we could withold it no longer, and our comrades received our account with great gusto, and for some time the mention of our oribe hunting was a most delicate subject. Crossing a small river which ran into the Tsitsana, we continued our trek for some ten miles, and as evening was drawing nigh we formed our encampment upon the banks of the Tsitsa River, at its confluence with the Tsitsana or little Tsitsa. At the junction a magnificent waterfall was formed of some sixty or seventy feet in height. We named it after our chief; and in future it will be known as "The Brownlee Falls." The scenery on the banks of these two rivers is very wild and rugged, and the rocky krantzes in the neighbourhood evince evident signs of having at one time been the strongholds of the now exterminated Bushmen; for the faces of most of the precipices were pierced with natural caves and crevices. A few partridges were shot by A——, J——, and P——. They were of the grey wing species, and very strong on the wing. It seemed surprising that during our long trek so few of feathered friends were met with, for especially just at this part of the country the population was sparse, and kraals few and far between.

Early on the morrow we were up betimes, and inspanning our oxen we crossed the Tsitsa near to its source. It is one of the largest of the up-country rivers, and, after receiving many tributary streams, pours its waters into the Umzimvooboo, or St. John's River. The country from here to the sea has been designated by Mr. Orpen "The St. John's Territory." This is very appropriate, as at present the country is so broken up under different chiefs that it is a matter of some difficulty to recognize the territory as a whole without enumerating the separate dependencies. A portion of it is known as Nomansland; but this again is rather vague, and the present innovation is certainly a success. About breakfast time we arrived at the "seat of Government," *i.e.*, the temporary abode of the British Resident. It was situated upon the banks of the Tsitsana, at the foot of a conical hill, which can be discerned many miles off. In the neighbouring kloofs eland are to be found, but we had no opportunity of getting a sight of any of these noble beasts. It was with a sense of relief that we settled down for a day or two; for continual trekking gets somewhat wearisome without any break. Our habitations were raised close to the magistrate's abode, which consisted of one very large Kafir hut—the largest, with one

exception, we saw up-country—and several smaller outhouses of a similar build. We managed to secure a fat young cow, which was speedily slaughtered and the fresh steaks were soon frizzling and sputtering on the embers. Our breakfast was partaken of in *al fresco* fashion, and the fresh sweet milk supplied to us from the larder of the Residency added to the enjoyment of our open air meal. After we had discussed the morning repast, a great deal of business had to be got through, for our chief had to meet the headmen of the Bastard Location, and afterwards the chiefs Lahana, Labenya, and Zibi, all men of importance, who were on the road down to meet and palaver with the Commissioner. These latter chiefs have their allotted countries upon the borders of Basutoland, and form a capital, reliable contingent in case of any disturbance with the natives more southerly. Their loyalty has been put to the test, and they have not been found wanting. Doubtless their own interest points out to them the necessity of keeping on friendly terms with Government; but at a trying time they were most steadfast, which leads one to suppose that their friendship is not a mere venal one.

A large open tent was erected wherein to hold the conferences, and at eleven o'clock the Bastard Headmen assembled. We noticed Adam Paul, Andries Duploy, and many others of local note. Duploy was recognized as the head-centre, and took the lead in the discussion. There were few, if any, complaints, and all they asked for was that their farms should be secured to them, and also that all Kafir or Fingo natives should be hindered from having holdings in the country which they were to consider as their own, and thus prevent any possibility of a collision. Mr. Brownlee noted all that was urged, and said that as far as the Government deemed it advisable their wishes should be carried out, and that its decision would be conveyed to them through their magistrate, Mr. Orpen. The meeting closed by the headmen thanking Government for sending as their representative one in whom they could place such confidence, and ended by saying that any order issued by him should be carried out as he directed. Altogether the business was concluded most satisfactorily, and the evident pleasure evinced at the arrival in their midst of Mr. Brownlee, a man already so well-known to them, was most marked.

In the evening the most of our party were "received" at the Residency, and returned later on, greatly pleased with their host, hostess, and the entertainment. As night set in we sat for some long time outside our tents, discussing the events of the day and past week, and when we finally retired, the gentle ripple of the Tsitsana river, gradually wafted us from terrestial thoughts to the more flowery imaginations of Sweet Sleep.

The morrow dawned most brilliantly, and ere the sun had well lifted his head above the horizon our little camp was up and stirring. A refreshing bath in the little Tsitsa preceded an ample breakfast,

and we then proceeded to make arrangements for the reception of the native chiefs, who were expected early. About eleven o'clock the head of a cavalry procession was descried winding its way over the crest of the opposite hills, and about an hour after a troop of dusky warriors headed by their respective chiefs entered the camp from the North in Indian file. The first to make his appearance was Lahana, and he was shortly followed by Labenya; their followers number in each about one hundred and sixty, well armed and horsed. These two chiefs, with their dependants, are Basutos; whilst the third, Zibi, who did not arrive until later in the day, is a Fingo. The meeting was held in the same marquee as that of the day previous, and though of political importance there was nothing much to attract a stranger's attention, except perhaps the fact that they were equally pleased to welcome the Commissioner as were the Bastards. We cannot refrain from calling to mind one gentleman in particular, who played a prominent part in the proceedings. His name was Joel, a Basuto, and who being attached to the magistrate's household was held in great esteem by his less enlightened countrymen. Without any invitation he undertook the part of master of the ceremonies, and with the prefix of Herr Von, which was accorded to him, he conducted the different presentations and military manœuvres in a manner that would do credit to the officiating gentleman in a provincial circus. As each successive chief arrived he was stopped and orders were issued to him as to how he was to act; first circling round in Indian file at a walk, then trotting round in double rank, and finally halting and fronting in line, and taking the word from their dusky conductor, there burst from them three hearty cheers for Her Majesty and the Commissioner; Herr Von Joel, standing in front and raising his old leather police helmet, gave the key note with "Geep, geep, hullay!" "Geep, geep, hullay!" He then made them all dismount, and personally introduced each chief and headman. The whole spectacle was most amusing.

The next morning we were under weigh at an early hour, accompanied by Mr. Orpen and some hundred Basutos. We experienced great difficulty with our wagons, owing to the saturated and swampy state of the ground, for the rains of the previous few days had made a great impression upon the lowlands, and rendered it a hard matter to struggle through the sedgy flats which characterized some parts of the country.

Superstitions among the Native Races.

This is a matter which has perplexed missionaries as well as Government officials. All regard the influence of superstition as an evil, and one of great magnitude, and the question has, times without number, been asked how the evil is to be dealt with and eradicated.

One says, prohibit superstitious customs by law, and punish those who practise them; another says, convince the natives of their folly and absurdity; while a third says, unless you give the barbarian something better it is absurd to think of removing his erroneous faith by legal enactments or by simply proving its absurdity.

It is not my object at present to express any opinion as to what should or should not be done, and even were I so inclined, I do not think the *Cape Monthly* the proper medium for introducing a subject on which such great diversity of opinion exists, and will, therefore, content myself by selecting two or three cases illustrating the power of superstition over the native mind, and how it may be used as an instrument for evil, socially as well as politically.

Many men believe that most barbarous tribes have no religion at all, and that they do not recognize a Supreme Being, but this opinion, in most if not in all cases, on due inquiry, will be found to be incorrect, and it is quite easy to account for this erroneous impression. Ask a barbarian about his religious belief, or what is generally termed superstition, and why he does this or that, and he will say he does not know, or that it is the custom. In many cases this answer is an honest one; the man really does not know why he does certain things, exactly as in Christian churches, where forms and ceremonies are adopted, the great body of worshippers may be in utter ignorance of the import of the forms used either by themselves or the celebrant. There are some, however, among the natives who would regard any question respecting their religious belief as impertinent curiosity into matters on which only the doctors or magicians should speak, and would either give an evasive answer, or one which would lead to the conviction that they had no religious belief whatever.

Many years since, while travelling across the Kie, the views just expressed were very distinctly illustrated.

It happened that, at the time referred to, I stayed for a night at the kraal of one of Kreli's chief councillors, named Tena, a fine specimen in every respect of a wild barbarian. One of Tena's huts had been cleaned and put at my disposal, and on entering the hut I found that the old man had recently been engaged in a religious ceremony, for in the roof of the hut I saw suspended the horns and part of the face of a calf.

In the evening Tena came in to pay his respects to me, and in course of conversation, among other matters, the following dialogue took place between us:—

"Now, Tena, can you tell me what will become of you after death?"

"When I die, I die; there is an end to me, and I am no more."

"But you do not believe this?"

"I do, most decidedly."

"What is the meaning of those horns I see fixed in the roof of the hut?"

"They are the horns of a young ox that I recently offered in sacrifice for my wife and child."

"To whom did you offer the sacrifice?"

"To the spirits of my departed ancestors."

"Why?"

"To express my gratitude to them for the birth of my child, and in order that they should be propitious to him and protect him."

"Can they do this, and do they know that you have offered this sacrifice to them?"

"Oh yes, and had I not done so, some calamity might have befallen me or my child."

"Then your ancestors are not dead, but take an interest in your affairs?"

"Yes."

"Then they are alive, and know what is going on?"

"Yes?"

"Will it not be so with you?"

"I don't know, but I suppose it will."

"If the spirits of your ancestors live, and take an interest (and, as you admit, it may be so with you), in the affairs of their descendants, how can you say that when man dies, he dies, and there is an end to him?"

"Well, this is wonderful, I have always acknowledged the immortality of the soul, but I never *knew it*."

While no retribution, either now or hereafter, is supposed to follow acts of immorality, however gross they may be, the native believes that the displeasure of the spirits will be manifested for any breach or non-observance of native custom. Hence we find their great conservatism and decided objection to change and advancement in those tribes that have not been dispersed or broken up, but which have all along had their doctors and priests among them to perform their religious and superstitious rights at births, sickness, and deaths, and in all other circumstances, of whatever nature. When an army proceeds to war it has to be charmed, propitious and unpropitious omens have to be observed and made known by the magicians, and even thieves going out to steal often go out under these auspices.

A most extraordinary effect of superstitious belief happened in the war of 1850. Several thousands of Kafirs had assembled to carry off the Fingoe cattle at Alice, shortly after the breaking out of the war. The magicians had done all that was necessary, and the army moved on from the Tyumie before dawn, in high spirits and confident of success. When the expedition had reached the high land between the Gaga and Tyumie, a crested hawk-eagle came hovering over the

Kafir host, uttering its shrill and piercing shrieks. The wise men told Oba, the Chief who commanded the expedition, that this was a bad omen and boded disaster; they therefore entreated him to countermand the expedition for that day, but Oba, a young chief, who afterwards earned the soubriquet of "The Lion," considered it a bad omen that he should show fear and retreat, without striking a blow on this his first command. Oba's second in command was Quarana, the man who commanded the Kafirs and drove back General Somerset when endeavouring to open communication with Sir Harry Smith at Fort Cox, when Gordon and Melvin, and twenty-nine men of the 91st were sacrificed.

The Fingoe scouts, six in number, were driven in by the advancing column of Kafirs, but continued to fire as they retreated, till they were joined by six others, when Quarana was mortally wounded and sent to the rear. The sight of the dying councillor, and his horse covered with blood, struck a panic on the hesitating Kafirs, the omen was being fulfilled; they turned and fled. It was in vain that the Chief and his few supporters entreated, threatened, and used violence. Nothing could rally the panic-stricken host, for many of whom had not advanced beyond the spot where the crested eagle hawk had warned them—and they never stopped till again sheltered in their forest retreat. This ignominious flight is attributable solely to the unauspicious omen, for the Kafirs are not wanting in courage, as the same men had shown a few days previously, when they had driven General Somerset and 600 men before them into Fort Hare.

The superstition, however, which is the most troublesome and inconvenient is the belief in witchcraft, and every heathen native is a firm believer in it. Every man, woman, and child believes that he or she is liable to disaster, sickness, or death through the arts and machinations of wizards and witches, whose most potent spell is the flesh, bones, hair, and, in short, anything which may have belonged to some deceased person. In order that the bodies of chiefs, at least, should not be violated their graves are watched night and day for at least a year, when little of them is left for the arts of the sorcerers.

When the missionaries first came among the Kafirs—whenever any chief or person of influence was sick or died—one or more persons were accused of bewitching him. The accused were sometimes put to death; more frequently they were tortured to extort confessions of guilt, and their property was always confiscated. The person charged with the offence was generally some wretched outcast, but it almost invariably happened that he had wealthy accomplices, of whose forfeited property the witch doctor got a share. These accusations of witchcraft were frequently used for political purposes by chiefs or by aspirants for political power and position, to rid themselves of the influence of powerful rivals. Numerous cases might be cited in illustration, but I will mention one only.

In the early days of the Kaffrarian Mission an unfortunate man was accused of having opened the grave of a person of rank, and

taking some flesh from the corpse. This happened within half a mile of a mission station, and the missionary hearing of it at once went to the residence of the chief, with whom he had much influence. There he found a large concourse of people calling for vengeance upon the accused, who stood before the chief with a riem round his neck. The matter having been explained to the missionary, he asked the chief to permit him to go to the grave with the witch doctor and the accused, that he might satisfy himself as to what had taken place. The request being granted ; the chief, doctor, missionary, accused, and the crowd went to the grave, which was securely covered with bushes. After a careful inspection of the grave the missionary took hold of the doctor and drew him to the grave.

"What do you see," he asked.

"Nothing," was the reply, and an attempt to escape, but the doctor was held in an iron grasp, in which he was as helpless as a child.

"What is this" said the missionary, pressing the wretched doctor to the loose soil by the opened grave.

"It looks like the foot-print of a wolf" replied the doctor sullenly.

After pointing out the wolf's hair on the bushes over the grave, "One thing more," said the missionary, "show me the foot-print of the prisoner."

But none could be found. On an appeal to the chief the prisoner was liberated, and his accuser's property confiscated for his false charge ; and, what was of more consequence to him, his reputation was gone as a magician.

While it is believed that there are people who exercise evil influence upon others, it is also held that there are those who by charms can make men successful in whatever they undertake, even though the undertaking should be theft. The following is a case in point :—

After the cattle killing in 1856, thefts and robberies were of frequent occurrence, and in one locality in Kaffraria the magistrate was at his wits end with all these undiscovered robberies. Amongst the thefts which had taken place was one of three cows, which had been stolen out of a German officer's stable. The theft was reported without delay, and the magistrate sent two of his smartest men out, saying that if they did not bring back either the cows or thieves he did not wish to see them again. After great trouble and perseverance the cattle were traced to a forest near the Kieskamma, where one of the cows was found killed and the others tied up in the forest, but the thieves had made their escape, and were seen by the policemen on the top of the mountain watching them as they approached.

Shortly after this a store was broken into, and a large quantity of Indian corn stolen. The same men, with the same message, were sent to trace the storebreakers. This was difficult, as a great many persons had travelled over the road the thieves had taken during the night ; but they were eventually run to earth in a large Kafir kraal. The

huts were searched, and a quantity of mealies found. In the search pieces of cattle skin were found carefully concealed about the huts, and this raising the suspicion of the policemen they questioned and cross-questioned the women and children of the kraal, whom they had separated for this purpose, when it came out that the people of this kraal had committed most of the robberies which had recently taken place. Their plan was to drive the stolen cattle in an opposite direction from their home, there to kill them, and send the women for the flesh during the night. Five of the thieves having been arrested and brought before the magistrate, he observed that they all wore the same kind of charms round their necks. These, upon inquiry, he found had been given to them for a consideration by a little one-eyed doctor, named Umprempushe, or the Great Gun. These charms were to make the wearers successful, and whenever they committed a theft they were to chew the charms and spit over their shoulders in the direction from which they had stolen, and this would render their traces invisible to their pursuers. Umprempushe was therefore arrested, and being found guilty as an accomplice, he got three years' imprisonment with his dupes.

Six of the gang were still at large, when about two months after the capture of the first lot, a policeman came to the magistrate, saying if he would give him ten or fifteen men he would go that night and arrest the six men still at large, for as there was a cold winter rain the men who had hitherto been hiding in the forests would go to their huts to sleep. The suggestion was acted upon and the men arrested.

Umprempushe has returned from his captivity, but his occupation in the charmer line is gone; as from last accounts he was said to be in indigent circumstances. At any rate, it is not likely that any of the twelve would be disposed to patronize him again, though it was long before they were bowled out.

On the Study of Geology.

By Geo. W. Srow, F.G.S. and F.R.G.S.

PART II.

Having glanced at the wonderful continuance and development of life through the remote *Palæozoic* ages, I shall now continue the investigation through the secondary or *Mesozoic* rocks.

In doing this, with the rapidity I am obliged to employ, neither time nor space will allow me to touch upon each of the formations separately—of which they are composed. I must, therefore, merely glance, as before, at the different phases of life the examination of their contents make known to us.

In the *Trias* we not only discover a continuation of the air-breathing reptiles, as represented by the monster *Labyrinthodon*, whose great jaws were armed with teeth three-and-a-half inches long, and one-and-a-half broad at the base, and whose immense foot-print is deeply imbedded in the quartzose sandstone, but other forms of life are for the first time presented to us by the fossil spoor of huge *tridactylous bipeds*, and the remains of small insectivorous *Marsupials*.

The former belonged to the gigantic birds that were four times as large as the present ostrich, who have left their footprints in the *Triassic* rocks of the United States, where they must have wandered for generations in troops, along a tidal shore, leaving the proofs of their former existence, and their vast dimensions, marked in the sand. Some idea of these giant creatures may be formed from the measurements given by Professor Owen, who states that one of them possessed a foot twenty inches in length, and twelve in breadth, between the outer tips of the toes: that "the average extent of stride was between three and four feet; the same limb was therefore carried out each step from six to seven feet forward." The latter prove the most ancient *Mammalia* were *Marsupials*, or pouched quadrupeds, all comparatively of a small size; animals of the same type as those belonging to the present fauna of Australia.

It is, however, the wonderful development of reptilian life that is one of the chief characteristics of the secondary rocks, and that has caused the period of their deposition to be styled *the Age of Reptiles*. This was especially the case during the *Oolite Lias* and *Wealden* formations.

We have seen during the last portion of the earth's primary stage of existence those quaint old *carboniferous* forests that covered enormous tracts of country; but in the period we have arrived at, not only have great modifications of the vegetable world taken place, but there has been a vast increase in the various forms of animal life peopling the globe with strange inhabitants. The deep seas swarmed with *Ichthyosauri*—great fish lizards—that frequently attained a length of more than thirty feet. They possessed huge heads, with tremendous and formidably armed jaws; bodies of vast proportions, which were swiftly propelled, with paddles like those of a whale. They had larger eyes than those of any other known animal; these were of such wonderful mechanism, and so perfectly adapted to the requirements of those monsters of the ancient deep, that they contracted sufficiently to enable them to endure the strongest glare of sudden light; or with expanded pupils chase their luckless prey through the darkest glooms. Each organ of vision being surrounded with a number of small long plates that shielded their eyes, either from the lashing of the wildest waves, when they came to the surface, or protected them from the undue pressure when they dived to the lowest depths of the ocean, at the same time giving them their contractibility and power of expansion,

all the properties both of the microscope and telescope. Their fierce and voracious habits must have made them the terror of the element in which they lived. This voracity has been most clearly proved by the fossil contents of their stomachs. These contents have been preserved with some of their skeletons; showing not only that the death of these particular individuals was sudden, but also demonstrating that they not only preyed upon other animals, but also upon the smaller members of their own species.

The *Plesiosaurus*, a fit companion of this gigantic creature, was a terrible carnivorous reptile of more than twenty feet in length, possessing a long swan-like neck, with a head and jaws armed with teeth, also like those of a crocodile. It propelled itself through the water with four whale-like paddles, similar to those of the *Ichthyosaurus* except that they were larger and more powerful in comparison to the size of its body. This strange being must have thronged the creeks and bays, and have proved as great a terror in the shallow seas as the great fish-lizard was in the open ocean.

The *Pterodactyl*, another of this wonderful group of monster reptiles, was a species of flying lizard, that seems to have possessed a combination of functions that enabled it to traverse either the land, the air, or the water. Some individuals of this genus, in the cretaceous epoch, possessed an expanse of wing that must have measured sixteen-and-a-half feet from tip to tip. This creature, with its large head and threatening teeth, must have been the very impersonification of the fabled dragon of old.

It is very suggestive when we find in those remote ages of which we have previously spoken, fish with affinities to some of the early *Crustaceans*; fish, again, with teeth having a reptilian type—the great fish-lizards—and the *Pterodactyl* and *Dinosaurians* approaching, in some of their characteristics, nearer to the feathered class than any reptile of the present day; whilst one of the most ancient known birds, the *Archæopteryx*, had a long caudal extremity, similar to a lizard, to which the feathers were attached in pairs, one on either side, its entire length. It seems as if in these old days the species of various types of animals gradually glided from the one to the other, and thus still further strengthened the idea of what I have before mentioned, a progressive development.

At the same time that the sea and air were tenanted by these wonderful creatures, land saurians, equally as formidable and gigantic, basked in multitudes along the muddy banks of the rivers and marshes. One of these, the *Teleosaurus*, must have measured some thirty feet in length, with enormous jaws of some six feet. Still, large as are the dimensions of these ancient races, it is only during the *Wealden* formation that reptile life appears to have attained its maximum growth.

The *Wealden* rocks, which measure about three hundred and twenty miles from east to west, and about two hundred from S.E. to N.W., with a probable thickness of upwards of one thousand feet,

are supposed to have once formed the delta of a vast river that flowed through part of some ancient continent, that has long ceased to exist. But it was through the forests that fringed this same old river that the mighty *Iguanodon* (whose bones are now disentombed from the deposits of the ancient delta) used to roam. This gigantic terrestrial reptile must have been a living colossus, as it is computed that the largest members of its family must have reached the astonishing length of from fifty to sixty feet. This great monster was herbivorous.

Wonderful as were his proportions, he could not lord it all alone, as his reign must have been frequently challenged by the huge *Megalosaurus*, a formidable carnivorous monster of thirty feet long, possessing a set of terrible curved teeth that combined all "the cutting properties of a knife, a sabre, and a saw," and were sharp and powerful enough to pierce through the toughest and thickest hide or covering that any of his giant compeers could have possessed. In their various encounters, fierce indeed would be the struggle for life; and the wild places of the old earth must have been full of violence.

The Mesozoic period was not only "the age of reptiles," but also that "of *Ammonites*." These wonderful inhabitants of the deep multiplied in that time to some five hundred species; some of them were of gigantic size, having shells quite three feet in diameter.

These immense *Cephalopods* sailing about, in a manner somewhat similar to the modern Nautilus, must have been the pirates of the ancient seas, seizing with their long arms whatever prey came within their way, and from whose tenacious grasp there could have been no hope of escape.

At one time it was thought, that from the great development of such gigantic forms as the *Ichthyosaurus*, the *Plesiosaurus*, the gigantic *Labyrinthodon*, and colossal *Iguanodon*, that there must have been something peculiar in the conditions of the earth during the *Mesozoic* ages with regard to its temperature and atmosphere, which differed especially from those now in existence, and that fostered the profuse and enormous reptilian growth; but this supposition has been clearly disproved by the discoveries that have been made in the fossil flora of the period.

From the close of the *Palæozoic period* many new genera of plants appeared, while others gradually became extinct. At the same time, with the increase of genera, there appears to have been a constant and rapid elaboration of species, giving rise to new forms of vegetable life. The forests of the northern hemisphere, notwithstanding they possessed their elegant *Conifers*, magnificent arborescent *Ferns*, *Zamias*, and other palm-like trees, had also (towards the close of the secondary epoch) other forms more familiar to Europe of the present day, such as the genera of the *Myrtaceæ*, the *Juglans*, the *Ficus*, and the *Oak*.

Strange, indeed, must have been the appearance of this mingled

vegetation, interspersed as it was with other forms, whose genera are now only represented by species growing in such distant countries as Australia and our own country of the Cape.

And stranger still, when we picture to ourselves some of the gigantic saurians of which we have spoken, roaming through woods, where species of the familiar Oak, the Fig, and the Walnut grew.

A climate where such trees were indigenous could not have differed greatly from those of our own time.

Many plants were of the same slow growth as now. Sir Charles Lyell cites one instance where a fossil tree distinctly displays two hundred rings of annual growth.

Among the *Mollusca* of those times there are a number of familiar genera, such as the *Pecten*, the *Ostræa*, the *Lima*, the *Turritella*, and the *Cardium*; while, among the fish, we find the representatives of the pike, the salmon, the shark, and the dog-fish.

The increase of insect-life seems also to show that the atmospheric conditions of the earth, at any rate during long portions of the time, must have been similar to existing ones. Thus species of grasshoppers and dragon-flies are found, together with a variety of beetles, a few *Lepidoptera*, or butterflies, and a *Bee*, among the *Hymenoptera*.

What a marvellons revelation does not the existence of a small insect of this description make known to us! Surely the result of such studies as these must be to fill us with astonishment and deep feelings unknown before, if we but for a moment meditate how these things reveal to us, through ages whose numbers we cannot conceive, the eternal wisdom and perfection of the works of the great Creator!

It is by the discovery of such wonderful facts as these, connected with ages so remote in the world's history—that the reptilian form was the dominant type of life—that we of the present day can realize to ourselves the hum and sounds of the insect world of that distant time;—the chirp of the grasshopper, the flitting of the coloured dragon-flies in the glad sunshine; while the perfume wafted from flowers, whose glory and beauty were never intended for the eye of man to see, lured the gay butterfly of the hour, and the more sober bee, to shake the pollen, and cull the nectar from their expanding corollas.

Pursuing the investigation further, we again have another old-world-picture represented to us. Before the close of the *Cretaceous era*, strong evidences are obtained of changing climates; and that, at one portion of that period, icebergs were again drifted as far south as England, where they as gradually dissolved, depositing their loads of boulders with the drift-sand at the bottom of the *Cretaceous sea*.

The astonishing discovery that has been made during the last few years, by means of deep sea dredgings, of the actual formation at the present moment of a chalk deposit at the bottom of the ocean,

has led some to suppose that we are still living in the *Cretaceous ages*. This expression evidently conveys an erroneous impression. Should the chalk of the present Atlantic ever emerge from the ocean after some enormous lapse of time, and form the rocky portion of some new continent, the geologists of those days will never confound the two series of rocks together. There will be as broad a distinction between them as that which now exists between those of the *Palæozoic* and *Cainozoic* systems. The older *Cretaceous rocks*, with their abundant fossiliferous remains of extinct *Ammonites* and gigantic reptiles, will never be mistaken for those of the present day; as the contents of *their* fossiliferous belts will only represent the existing types of life on the earth,—with perchance some relics of the handicraft of man.

The knowledge of the present day does not enable geologists to decide the cause of the great change that took place between the close of the secondary and the commencement of the tertiary or *Cainozoic rocks*. Rocks to be yet exposed in after ages may solve the problem. One thing seems evident, and that is that a great and continued denudation of the secondary rocks must have taken place at the close of the *Mesozoic period* similar to that alluded to previous to its commencement. The same break in the life-history of the earth again occurs; but whether this second gap in the sequence of animal and vegetable life was occasioned by the same cause that brought about the corrosion and wearing away of the more ancient rocks must be left unanswered until more evidence upon the point has been collected.

Notwithstanding this great break there are some connecting links between the two periods, showing us that it is only want of knowledge that prevents us from tracing the numerous and elaborate developments both in the flora and fauna during the interval. This interval must have been one of great duration, for when the conditions of that portion of the world of which we are treating were again so modified that sedimentary deposits recommenced accumulating upon the rocks previously laid down, the vast *Cephalopods* and *Saurians* had disappeared from the scene, and the imperfect *Mammals* of the *Marsupial* type had been succeeded by a higher development of placental *Pachyderms*. The marvellous size and immense variety of animals of this latter kind continued to increase in such numbers throughout the *Eocene*, *Miocene*, and *Pliocene periods* that these last have been styled "the age of great mammals."

The *Eocene* was so called because at that time species identical with those still living appear to have dawned upon the earth. But the physical geography of the world was vastly different to that shown in modern school atlasses. The *Eocene* continents and islands, lakes, rivers, and inland seas have long ceased to exist. It seems highly probable that the great masses of land and water in those days ran east and west instead of north and south as they do

now; and also that a warm climate pervaded a large portion of the northern hemisphere. There were evidently a number of oscillations of surface, and the sea gradually encroached and retreated over different parts of the land. The basin in which the city of Paris now stands was then a gulph into which a number of ancient rivers emptied themselves, while many of the deposits that extend from London to Sheppey, and upon which the mighty metropolis is now built, were once brought down by a great river that in those days flowed through an ancient Atlantis, that has since been wiped out from the face of nature. But although both river and continent have disappeared the examination of the deposits they have left has unfolded their history.

From their fossiliferous remains we find that no less than thirteen species of various palms allied to the cocoa-nut palm, and whose representatives are now only found in the Molucca and Philippine Islands, then grew luxuriantly and waved their graceful arms along the margins of the rivers and deeply indented shores, and with them flourished species of *Mimosa*, *Banksia*, and *Hakea*, similar to those found in the southern hemisphere. A species of *Anona* or custard apple also flourished there, while others of the gourd and melon family trailed their fruit upon the ground. Cones of the *Proteaceæ* show that they had a close affinity to the New Holland types, and a species of *Eucalyptus* demonstrates that the gum tree was once indigenous to northern climes, and mingled its foliage with that of various firs, yews, and cypresses.

Unwieldy turtles and great crocodiles of extinct species basked upon the muddy banks; and serpents allied to the Boa and Python, some twenty feet in length, lurked in the swamps or laid in wait in the forest brakes. Some of these Professor Owen believed to be marine, making the sea-serpent a reality of the past.

This is the period when the most ancient of the *herbivorous Pachydermata* yet known are found. Large herds of different kinds of the *Palæotherium*, a tapir looking animal, browsed upon the herbage. Some of the species attained the size of the rhinoceros; others, again, varied much in size and in slimness of make,—they were intermediate between the rhinoceros, the tapir, and the horse.

The *Xiphodon gracile* had a graceful, gazelle-like shape, with long ears like a stag. These herbivorous animals at the beginning of the eocene period seemed to have roamed over the verdant pastures undisturbed by any carnivorous animal, and thus they increased rapidly in genera and species.

The banks of the pools and rivers were frequented by the *Gastornis*, a wading bird superior to the ostrich in size; and antique opossums climed the forest trees. Here the first of the *Insectivorous carnivora* made its appearance in the shape of a species of bat, the *Vespertilio Parisiensis*. The quiet reign of the herbivora, however, was broken before the close of the period we are speaking of, and a

true carnivorous animal, the *Hyœnodon*, disturbed with his depredations the more peaceful habits of the older inhabitants.

In the neighbouring seas a gigantic *Cetacean*, called the *Zeuglodon*, found its congenial element. This great creature sometimes attained a length of seventy feet. It was accompanied by numerous fish, belonging to genera, that in recent times only frequent the seas of warm latitudes. Sharks and gigantic rays swarmed in the waters of the bays; together with a saw-fish and sword-fish unknown in our day to British seas.

Among the *Eocene Mollusca*, *Volutes* and *Cowries* are common; and, while multitudes of *Nautili* sailed over the tepid main, numberless *Cerithii* flourished in the mud of the numerous estuaries.

Does not this represent to us a wonderful picture of old-world Europe, with the tropical climate it then possessed; when the contours of its continent and seas were vastly different from the present; and still more wonderful to know that, in the same old time, not one of the great mountain-chains, the everlasting hills of the earth—such as the Alps, the Pyrenees, the Carpathians, and Himalayas—had any existence; and that at that time their very sites were occupied by the basin of the deep *Nummulitic sea.*

This, to one who has not paid any attention to the subject, seems almost incredible; but it is nevertheless one of those astonishing facts that science has proved beyond the possibility of a doubt.

It was during a portion of the *Eocene period* that vast accumulations of *Nummulitic limestone* took place in an ocean that stretched from west to east—from the present Atlantic, across Europe, to Thibet. These accumulations formed reefs in those ancient seas, and were composed of the innumerable remains of *Foraminifera.*

What now has become of those reefs of that old ocean whose waves beat for unknown ages upon them? Since that time startling changes have taken place in the features of the earth. Those very limestones, instead of occupying the basin of an ocean, are now embodied in the mountain chains I have mentioned; instead of being exposed to its tides and waves, they have been raised in the Swiss Alps ten thousand, and in the branches of the Himalayas, sixteen thousand feet above its level.

The stream of life glides onwards into the *Miocene period*, and approaches more closely than any of the previous ones the present day.

During the greater portion of this epoch England appears to have been above the surface of the ocean. It, therefore, possesses but few records of the time; but the formations of Central Europe, and some of the more northern countries, filled up the blank.

In these latter there were a number of oscillations of surface, and in them marine, lacustrine, and river deposits frequently alternate.

Britain, such as it was in those days, would not have been looked upon (in the present time) as an eligible home for nervous people; its active volcanoes would, I think, in their view, have fully

counterbalanced any inviting charms its different lakes might have possessed.

The climate was still a warm or sub-tropical one. Among its flora were two species of *Vines;* and besides these, there have been found remains of the *Laurel*, the *Chestnut*, and the *Oak*. These old oaks and chestnuts were associated with *Magnolias*, and a *Cinnamon-tree;* also a variety of *Palms*—one a species of date-palm, and another allied to the fan-palm of America. The remains of these accompany, in some places, the leaves of the fig-tree and seeds of a water-lily; also a species of *Wellingtonia*, whose living representatives are now only found in California. Besides these, there were *Proteas* and other similar plants that now flourish at the Cape of Good Hope; together with the *Banksia* that luxuriates in parts of Australia. "Evergreens predominated over deciduous trees, and arborescent forms over herbaceous."

The lower *Miocene Flora* assimilated so closely to that of America, that some geologists have been led to believe in the existence of a great continent that joined, during that period, the Old and New Worlds, over which the seeds of this particular flora could pass without obstruction from one portion of the land to another. Others, again, have imagined that this migration of plants must have taken an eastern direction, passing through Asia to the present American continent.

Among the *Miocene Fauna* we find not only *Pachyderms*, but animals combining the character of both the *Pachyderm* and the *Ruminant*: true *Ruminants* also, and an increase amongst the *Carnivora*. Among the first there were seven species of *Hippopotamus* —creatures of the hog tribe, that varied in size from the hippopotamus itself to that of the wild boar; the huge *Dinotherium*, the most colossal of all the terrestrial *Pachyderm Mammals*, whose skull sometimes measured four and a half feet long, and three feet broad; the *Mastodon*, a large elephantoid animal seventeen feet long; together with the extinct *Hippopotami* and *Rhinoceri*. In these *Miocene deposits* of the south of Europe, strong evidences of primitive genera of *Quadrumana* have been discovered, associated with a species of *Giraffe*;—one of the former was closely allied to the long-armed *Gibbon;* another, obtained in the south of France, was that of a tree-clinging *frugivorous Ape*, equalling man in stature. This ape formed a closer connecting link to the human race than that of any existing *Anthropoid* creature. All these old-world apes had a succession of teeth, their milk-teeth being replaced by a second set; while the last molar, or wisdom-tooth, in a young, but adult individual, was found only as a germ in the jaw-bone. The number of teeth also differed from that of the *Chimpanzee* or the *Gorilla*, but was identical with that of man.

Insect life abounded. Ten species of white ants have been discovered, some of them of comparatively gigantic dimensions; also large dragon-flies, and grasshoppers of considerable size; numbers of

Lepidoptera, some of them similar to those of India in the present day; in one instance the insect has been so beautifully preserved that the pattern of the butterfly's wing has been retained in the rock in which it was embedded.

Not only had Europe a sub-tropical climate, but a temperate one extended northward to within eleven degrees of the present pole. Greenland, Iceland, and Spitzbergen were in those days clothed with verdure. This marvellous scientific fact is demonstrated to us from the evidences of the rocks of the period, as plainly as if we had seen the wonderful change ourselves. From such unaltering testimony, we know for a certainty that they possessed their large-leaved oaks, and limes, and planes; "that ivy and vines twined round their forest trees,—that beautiful ferns grew beneath in the moisture of the shade;" that the hazel, the hawthorn, the buck-thorn, and the holly flourished there; together with the poplar, the beech, and the walnut. On the same shores were found a number of species of *Coniferæ;* also species of plants now confined to Japan, with others allied to the gigantic *Wellingtonia* of California. So temperate was the climate that not only these, but a species of the splendid evergreen *Magnolia*, grew and spread out its beauty to the sun.

What a wonderful contrast does not this picture give us to the present condition of these countries, with their inhospitable climes, and their shores for the most part covered with eternal snow and ice!

Professor Heer has calculated that at that time North Greenland must have possessed a temperature at least thirty degrees warmer than it is at present. What a change was there! but at that very time, from the evidences we may find in this part of the world, *if we will only look for them*, it is highly probable that there was an equally great divergence in the state of affairs here in this part of the southern hemisphere, as there was in the farthest north. While the date-palms were waving over the site of London, and old world giraffes were browsing not far from Central Europe, our own glowing country of South Africa was a veritable Southern Greenland, capped with a sheet of land-ice, and great icebergs breaking loose from its shores. But what an incalculable period of time must have elapsed since these things were! Vast changes, not only in temperature, but in the features of the earth, have since taken place.

Although there had been apparently a gradual upheaval of the bottom of the old *Nummulitic* ocean, and its waters had been drained off some portions of its original bed, still this vast geographical change had only proceeded so far that extensive plains extended, even during the *Upper Miocene* period, over portions of country now occupied by the lofty Himalayas,—where the giraffe, the camel, and a large ostrich found a fitting home; and *Elephantine proboscidians*, intermediate between the elephant and the mastodon, roamed undisturbed with antelopes, and a gigantic four-horned deer called the *Sivatherium;* while huge crocodiles lurked along the streams; and monster tortoises, nearly twenty feet in length and

seven feet in height, moved their unweildly bulk in these strange places of the earth.

In central France great lakes have disappeared, and high mountains have been formed by the reiterated eruptions of showers of sand, and scoriæ, and streams of lava,—from those ancient volcanoes, whose fires have been either dormant or extinct from a period so remote, that the space occupied by "historic times" is but as yesterday.

Sir Charles Lyell gives the following graphic account of some of these changes that took place :—"We can still recall to our thoughts the 'external condition and physical condition' of the country before these wonderful vicissitudes began, or while a part only of the whole had been completed. There was first a period when spacious lakes, of which we may still trace the boundaries, lay at the foot of mountains of moderate elevation, unbroken by the bold peaks and precipices of Mont D'Or, and unadorned by the picturesque outline of the Puy de Dome, or the volcanic cones and craters now covering the granite platform. During this earlier scene of repose, deltas were slowly formed—beds of marl and sand, several hundred feet thick, deposited ; siliceous and calcareous rocks precipitated from the waters of mineral springs ; shells and insects embedded together with the remains of the crocodile and the tortoise ; the eggs and bones of water-birds, and skeletons of quadrupeds, most of them of genera and species characteristic of the miocene period." To this tranquil condition of surface succeeded the era of volcanic eruptions, when the lakes were drained, and the fertility of the mountainous district was probably enhanced by the igneous matter ejected from below, and poured down upon the more sterile granite. During these eruptions, which appear to have taken place towards the close of the miocene epoch, and which continued during the pliocene, various assemblages of quadrupeds successively inhabited the district, among which are found the genera *Mastodon*, *Rhinoceros*, *Elephant*, *Tapir*, *Hippopotamus*, together with the Ox, various kinds of Deer, the *Bear*, *Hyæna*, and many beasts of prey which ranged the forest or pastured on the plain, and were occasionally overtaken by a fall of burning cinders or buried in mud, such as accompany volcanic eruptions. Lastly, these quadrupeds became extinct, and gave place in their turn to the species now existing."

Passing from the *Miocene* to the *Lower Pliocene* formations, the same unerring evidence tells us that although the *Mastodon* and a true elephant, the *Elephas Meridionalis*, a *Rhinoceros* and *Hippopotamus*, together with many species of the deer, roamed at large over that portion of the old continent now occupied by England and France ; still it is from the same testimony that we find that there had been from the close of the *Upper Miocene* a modification of climate, gradually becoming less tropical than it was, and more nearly approaching that of Madeira at the present day.

During the entire *Pliocine period* a number of oscillations, not

only of land but also of climate, took place. Each time the cold appears gradually to have increased, until it attained its maximum intensity during the last *Glacial period*, that occurred at the time of the deposition of the *Newer Pliocene* and *Post Pliocene* rocks. I say last glacial period, for I have before briefly pointed out the reasons I had for considering that it was not at all improbable that England had had previously on several occasions a climate equally severe. This conclusion has been forced upon me by a long and careful study of the rocks of South Africa, a subject to which I shall again allude.

There can be little doubt but that during the age of the great *Pachyderms* that the "old country" formed part of the ancient continent that then existed, over which they could roam in freedom from one end to the other, and that they gradually migrated southward in search of more congenial climes as the cold wintry blasts and drifting snow slowly but surely gained the ascendancy over the warmer breezes that once fanned the cypress, the *Eucalyptus*, and the *Palm!*

Even during the ages occupied by a portion of the *Lower Pliocene*, drifting ice occasionally visited the neighbouring seas. But the ancient submerged forests at Cromer, on the coasts of Norfolk, prove that a temperate climate intervened before the final mastery of the Arctic cold. What strange vicissitudes does not this study of geology reveal to us!

Tropical England, with its evergreen forests and its palms; its mighty pachyderms, its apes, its pythons, and its crocodiles!—England again a very Greenland, with its huge ice capping hundreds of feet thick, without verdure and without life; its vast glacier-streams grinding and remoulding its hills, its valleys, and its shores! England again, with its sister-kingdoms, an Archipelago of little islands in an icy sea covered with floating icebergs, that crashed and crushed together in the war of winds and waves; while shoals of huge cetaceans rolled their unwieldly lengths in the depths of the ocean that flowed over the site of St. Paul's and Westminster!

During a portion of this period the Alps had attained a considerable altitude, and were covered with enormous glaciers several thousand feet thick, and of which those of the present day are but the tiny representatives.

When an amelioration of temperature set in, and the snows and ice diminished, there was again a migration northward of a number of the old forms of life, accompanied by others that were new; but many of the familiar shapes were wanting. In the long interval of ages that had intervened they had either become extinct or given place to other developments, or had moved so far south that the simultaneous changes in physical geography which must have operated equally over the face of the earth had cut off their return, and confined them to the widely separated and isolated tracts they now inhabit.

England had again become a portion of the continent. When the surviving races and their companions returned, they could freely traverse the intervening space now occupied by the Straits of Dover and the English Channel. Among them were the *Mastodon*, the *Elephas Antiquus*, the *Elephas Primogenius*, or the great *Mammoth*, from sixteen to eighteen feet in height, and with monstrous curved tusks from ten to fourteen feet long, a species of *Hippopotamus* and *Rhinoceros*, with vast herds of Reindeer; and roaming amongst these we find cave-bears, hyænas, and lions—fierce brutes, larger than their more modern African brethren—the *Megaceros Hibernicus*, or gigantic Irish deer, a link between the rein and fallow-deer, with enormous horns branching from nine to ten feet; a wild ox, also wild bisons and horses. So numerous and widespread were the reindeer throughout Europe, that the time of their occupation has been called "the Reindeer age."

Coeval with the animals I have mentioned, many of which have become extinct, there was another visitor to the plains of Europe, who, no doubt, in a great measure, assisted in driving out and exterminating his giant associates. He was of a wild hunter race—a race of cave-dwellers—apparently similar in stature, in habits, in manners and customs, to some of the primitive races of South Africa, using in the days of *Mammoth* identically the same stone and other instruments, as are so abundantly found in this country. Fond of depicting the animals that he hunted, he has left numerous carvings on the antlers of the reindeer of the various objects of the chase. Among others, in a cave at Perigord, were found the outlines of the *Mammoth* itself, with its enormous curved tusks!

The existence of this remote race of men has been so clearly established, that few in the present day question this surprising fact. Vast periods of ages must indeed have passed away since those impartial evidences were entombed, to re-appear again in these our days *for our learning*; periods of such immense duration, that not only have climates changed, lines of drainage altered, and great animals have become extinct,—but the very geography of the earth has assumed a different outline, and the distribution of terrestrial animal life has been completely modified.

It would be impossible to make even an approximate calculation of the thousands of centuries that would be required to bring about such important physical changes as these. All that we positively know is, that some of these operations of Nature took place suddenly; but in every case there has been a grand, solemn progression of events, compared to which the most extended historical, or even traditionary records of the most ancient nations of our race would form but a very infinitesimal portion of such a period.

At a time when the *Cave-Hyæna* nightly awoke the echoes of the rocks and glens, and the *Cave-Lion* prowled over the plains of Europe for his prey, the principal divisions of the earth, however much their several contours were afterwards altered, were already approaching

their present conditions; and many types of animal and vegetable life, previously indigenous to the same soil, had become so isolated and cut off from each other, that any further intermixture, such as I have described during previous epochs, was finally prevented.

These types of life had ever extended farther and farther, from whatever centre they may have originated—(like the ever-expanding ripples on a pool where a pebble has fallen),—so these continued to expand over large areas, their direction of expansion in a great measure being guided by a congenial climate, until, perhaps, in the one instance some insurmountable barrier, such as the ocean, prevented their further progress, and the moving climate left them behind on inclement shores, where they became extinct; while in another, the submergence of the land over which their predecessors had slowly passed, cut off their return, thus isolating and even preserving until comparatively recent times some of the ancient zones of life.

This has clearly been the case with regard to New Zealand, with its *Ferns* and *Conifers*, its gigantic birds that vied with the bipeds of the *Lias*, and its almost entire want of quadrupeds.

Australia, with its characteristic Flora, and the absence of any higher type of life than the *Marsupial*, again reminds us of the *Mesozoic age*. Such remarkable and striking instances as these appear to the scientific man as the remnants—yet living remnants—of the ancient world.

Mr. Baines' Book on the Gold Country.

Most of our readers are probably aware that a new book on South Africa by our old friend, Mr. Thomas Baines, is now in the press in London, and will be shortly published. It will be entitled, "The Gold Regions of South-Eastern Africa." A prefatory chapter will contain the latest discoveries at the Lydenburg, and information relative to the routes thither; but the strength of the book will be devoted to descriptions of the gold-producing regions of Southern Africa, right on from Natal to the Zambesi. We have seen much of its contents before they were brought home some months ago by the publisher, Mr. White. Among these, besides admirably picturesque descriptive writing, there are numberless itineraries of the various routes given with minutest accuracy. There are maps prepared with Mr. Baines' wonted and most scrupulous care; and there are illustrations engraved from photographs of his own oil paintings, the very catalogue of which forms entertaining reading. Most, if not all, of these photographs we have seen. They are by Messrs. Kirch, of Durban, and reflect high credit alike upon artist and photographers.

1. The Lion Family in The Tsetse Fly Country near the Macloutsie River, south of Matabili Land; there were nine in all: one large male,

two females, and six cubs of different sizes, as if belonging to two litters. They made off after my first shot.

2. The Dead Buffalo in Zululand : the king vulture advancing to eat the soft parts of the body, and common vultures gathering round.

3. The Black Rhinoceros : the vicious species near Oliphant's River, north-east of Lydenburg.

4. The White Rhinoceros : the quiet species, very fat and excellent eating, Zululand.

5. The Lady's visit to the Giraffe, Oliphant's River, north-east of Lydenburg.

6. The Hippopotamus, Oliphant's River, north-east of Lydenburg.

7. The Eland, Mangwe River, Matabili Land ; driven home nearly five miles, and shot near Mr. Lee's house.

8. The Koodoo, Zululand ; the Great Strelitzia, the monkey rope ; Euphorbia tree fern and aloe may be seen among the vegetation.

9. The Victoria Falls, Zambesi River : 400 feet deep, 1,900 yards wide, spary cloud rising 1,200 feet. Latitude 17°55·4 south. The narrow chasm in which the river runs may be seen below the falls. Basobab, date palms, and palmyrus, aloes, &c., in the foreground, with buffaloes and elephants.

10. Vega Camp, Monoti River, Natal, during the Hon. T. Shepstone's embassy to Zululand ; Strelitzia and palms in foreground, the Armstrong guns in camp, Durban artillery volunteers at drill.

11. The Zulu telegraph by smoke of grass fires, rendezvous camp on south bank of the Tugela River, the Durban volunteer artillery pitching their tents to await the arrival of the Hon. T. Shepstone on his embassy to Zululand ; while on the opposite bank a long line of ascending smoke clouds is carrying the news of our advent far into Zululand.

12. The rival Isimbouge or court flatterers, jesters, bards, or heralds shouting the praises of their respective masters. The man with the shield is Ketchiwayo's Imbargi, the other with the police coat and card and feather headdress is Mr. Shepstone's.

13. Kwumagwasa, or St. Mary's head quarters of the Mackenzie Memorial Mission in Zululand, occupied by Bishop Wilkinson and the Rev. Robinson.

14. The Natal Carbineers at Bushman's Pass, November 4th, 1873 : Major Durnford and Elijah Kamboule in front talking to the Kafirs ; Captain Barter on white horse coming to speak to Major Durnford ; the carbineers in rear trying to keep the Kafirs back without firing on them ; the Kafirs pushing through and taking up positions to fire from—pointing their guns, sharpening their assagais, &c. The painting is from a sketch by H. Bucknall, one of the carbineers.

15. Durban and Port Natal from Mr. Currie's residence on the Berea. Yacht race in the Bay ; volunteers at drill ; railway train.

16. The Victoria Mounted Rifles in their tent at Rendezvous Camp during Mr. Shepstone's embassy.

17. Leopard ; likewise a group of pallahs, near a rivulet near the Zambesi : Sunset.

18. The Death Shot : buffalo shot through the lungs ; Semotchie River, Matabili Land. This picture shows the manner in which long reaches of these sandy rivers retain water in the dry season if hollows

occur in the bed rock beneath the sand. This reservoir of wet sand is better than an open pool, because the water is kept clear and cool, and the traveller when he digs a watering place for his oxen is not obliged to drink what they have fouled, but can make a small hole at a distance to obtain clear water for himself.

19. Lions crossing the Limpopo at Weg Draai : hard wood and thorn trees on bank, fish eagles in dead tree, hunter firing from opposite bank.

20. "Dying Avenged." The sable antelope seized by the lion and torn on the neck, withers, and breast, has driven one horn through the lion's throat, the other tearing the lip as it passes between the jaws. I have found the horns of this buck, with the blood and hair of the lion on them, and I have seen a dog pierced through from breast to flank. The lion generally springs on the near side of his prey, throws his right fore paw over the withers, and with his left cripples the near shoulder ; he then with his right hind paw tries to push backward the near hind leg, thus disabling the whole near side of his victim. The natural action of an animal in pain is to throw its head back, and the lion waits for this to sieze the neck in his teeth, and inflict the death grip. A horse knee-haltered cannot throw his head up, thus the lion is baulked, and if help be at hand the horse may be saved before the lion finds his error, and shifts his position.

21. The Mosi-o a-tunya (smoke-resounding), or Victoria Falls of the Zambezi River from the edge of the wet forest near the western end of the gorge. In the foreground on the spectator's left is the westernmost cataract or leaping water, the channel of which being somewhat deeper and more inclined than the other parts, allows a greater body of water to rush down it in a rapid, foaming torrent, which leaps shear out from the edge of the precipice, and breaking into flaky tongues of foam more resembling snow wreaths than liquid water, falls in a sweeping curve into the abyss 400 feet below ; its jets of spray and lighter particles leaping and flashing like myriads of diamonds in the sunlight, and reflecting the prismatic in vivid but transient beauty as they hurry down to the shadow of the chasm. Next is the dark precipice of Three Rill Island, with the chasm of the three rills indenting its massive front ; and beyond that is the Great Western or main fall stretching away in dim and misty distance, the trees of Garden Island of Dr. Livingstone being very faintly discernible beyond it. The eastern half of the falls are lost in the clouds of spray and mist which rise eternally from the troubled depths, and which, when the sun is above the horizon, reflect a double rainbow so intensely brilliant that the eye shrinks from gazing on it. The trees, kept ever damp and moist by the constant spray shower, attain a height of over 100 feet, and when their rotted trunks break down from age seedlings take root in them, and send their branches aloft and their roots downward, sapping the decaying stem until they reach and take firm hold of the earth. The elephant, the buffalo, the rhinoceros, and other moisture loving animals wander here to enjoy the refreshing shower bath ; antelopes of various kinds frequent the borders of the forest ; baboons wander through its recesses searching for fruit, bulbs, or insects, and various monkeys gambol through the branches, passing from tree to tree by the creepers which lace them ; while delicate ferns cling to and adorn the dead or decaying trunks. The

width of the falls is 1,900 yards ; the depth 400 feet ; the width of the chasm from 75 to 130 or 140 yards ; the spray-cloud rises 1,200 feet.

22. A herd of Buffaloes driven to the edge of the precipice opposite Garden Island, Victoria Falls. The late Mr. James Chapman and Mr. Baines were making their way through the wet forest, admiring the novel and beautiful scenes that fronted them, changing at almost every step of their advance, when in the palm swamp at the end of the forest they came suddenly upon the herd of about 100 buffaloes, which, disturbed in their enjoyment, scowled viciously at them from under the great masses of horn that overshadow their eyes. The herd seemed inclined to sweep round to leeward to get the scent of the intruders, when they would probably have charged. The travellers fired on the foremost, sometimes retreating to cover as a wounded beast charged at them, and returning again and again to prevent the buffaloes getting the "lee gage." At length they succeeded in turning them, and the whole herd rushed tumultuously to the edge of the precipice, the travellers holding their breath for the moment in sympathy for what seemed their impending fate. Whether any rushed over could not be seen, and in such close proximity there was no time to waste in sentiment. A few more bullets drove them to retreat along the edge of the cliff. The victors sought out and terminated the sufferings of the wounded, and then returned to camp to cheer the hearts of their native followers with intelligence of the glorious feast that awaited them.

23. A Lake or Expansion of River in Zululand : the shores are fringed with reeds, and thickly clad with leaves of various kinds—knob-thorn, flat crowned mimosa, and others ; date and fan palms, cuphorbias, and giant strelzias, some of them draped with the wild convolvulus, give variety to the scene, while the gigantic Natal bean, with pods from three to five feet long and four or five inches wide, creeps along the ground or up the larger trees. Hippopotamuses rear their equine heads from the distant waters ; Kafir cranes promenade the shores ; flamingoes, scarlet-winged, wade along the beach ; pelicans launch out into the depths ; white-headed eagles swoop up fish that appear on the surface, or retire when sated to overhanging branches ; crocodiles bask upon the mud, or paddle stealthily under the lily leaves which the little Avoset runs over ; while various finches build their pensile nests from overhanging branches, the cock bird resting when he wishes on his little perch, while the female bird only enters to feed her little fledglings.

24. Lions feeding on Quagga, Zululand : in a flat or open valley, bordered by the rounded tree-clad hills so common in that country, five lions have chased down a quagga. Two full grown males, with a younger one between them, have possession of the carcase, while two females are busy with tit-bits they have removed to a little distance. [This scene is from a sketch by the Hon G. C. Dawnay, who disturbed them at their repast.]

25. The Black Rhinoceros charging out of thick bush, Zululand.

26. View of Durban.

27. View of Paradise on the Bluff.

28. Drinking Time : a group of Koodoos,—a male with spiral horns, a female hornless, and a young bull with horns just appearing,—have found their way at sunset to a quiet pool on the Luisi, a tributary of the

Zambesi River; a troop of sable antelopes approach it from the other side, and lizards sip from the rocks in the foreground. In the middle distance is a fig tree growing on a rock. A seed perhaps fell in a small cleft, and as it enlarged sent out roots to suck earth and moisture, covering the rock as with a network; in the distance is a baobab. I have measured one of these giants of the forest, and found its stem 101 feet in circumference.

29. Outspanned by Moonlight, Zululand. The patient oxen tied to their yokes and lying in double lines before the wagons; the men are sleeping on either side and in front, but they anticipate no danger from lions, for they have allowed their watch fires to die out; some of the oxen leisurely eye the prowling hyena, but deem their rest too precious to break it for his sake: of course he keeps under the lee of the camp, so as not to arouse the watch dogs.

30. "Gold and Ivory:" an elephant charging over a quartz reef in Matabili Land. I have measured an elephant ten feet eight inches high at the shoulders, whose ears were five feet three inches high, and three feet four inches broad. The action of the elephant is recognized as truthful by experienced hunters. The tallest elephant that I have measured was a few inches more than twelve feet at the shoulder, and probably about thirteen feet at the highest part of the back.

30A. A different treatment of the foregoing,—the elephant seen end on, just as I have seen them when I have had the pleasure of being chased by the colossal animal.

31. The Royal Mail Steamer *Kafir* leaving Port Natal.

32. Van Reenen's Pass on the Drakensberg, looking up from Natal towards the Free State, the boundary of which is beyond the farthest visible ridge. A wool wagon is bound downwards to Natal, while others for the Tati, the northern Gold-fields, the Diamond-fields, or the various parts of the interior, toil up the winding ascent. The pass is about 5,000 feet above the level of the sea.

33. Aloe, Bainesii, south of Tagela Gold-fields, Natal. On the 5th June, 1873, passing with Mr. C. F. Osborne along the rocky hills of the Inana, a rivulet between Grey Town and the gold-bearing reefs of the Tagela, I observed several large tree aloes, and on the 2nd July repassing the spot I stayed to sketch them, and sent a Kafir to gather a branch and a flower, if possible, but, unfortunately, the flowering season was passed. The tree I sketched was about twenty feet high, and the spread of the crown perhaps fifteen feet. It differed from the great tree aloe I sketched in Damaraland, its leaves being more slender and turning down, whereas those of the Damara variety turn upward. I think also theh flower is scarlet, while that of the Damara is yellow. The branch plucked by my Kafir was carried 120 miles, subject to all sorts of roug usage, and was then shipped to England, yet it reached the Royal Botanic Gardens alive, and is, I am informed, now growing there. It is declared to be a new species, and is named Aloe Bainesii. Aloe Zeyberi, or Barberœ is a tree aloe, but differs in the setting on of the leaves and other particulars.

34. What led to the Discovery of the Gold-fields. Traditions of the Gold-fields of South Africa have been rife amongst us for many years, and Mr. Henry Hartley, formerly at Bathurst, was well acquainted with

them. When he gained permission to hunt in Matibili Land he followed the spoor of elephants for great distances,—sometimes forty or fifty miles—before overtaking them. In the present instance his elephant has fallen dead over a quartz reef with old diggings in it, and Mr. Hartley is asking his followers whether these were not the Gold-fields: the answer is that their fathers were accustomed to dig some kind of iron or metal different from that from which their weapons were made. Inyoka and Makoonda, Mashowa followers, are pointing out the country to which the survivors of the Maskowa tribe have fled. On returning to the Transvaal Mr. Hartley met Carl Manah, who went with him next time, and at once proclaimed a gold-field.

35. Wagon crossing one of the coast rivers, Natal. Strelitzia, euphorbia, nogenboom, and coffee farm.

36. A Kraal in Zululand: Oham and Isiweda, two of the royal brothers receiving the advance guard of a regiment on its return from a regiment.

As an indication of the appreciation in which Mr. Baines' forthcoming book is held in Port Elizabeth, we may state that the names of some seven hundred subscribers have already been put down for it; and there can be no doubt that it will have a very large circulation alike in England, in South Africa, and in other colonies. Its highest value will be its intense conscientiousness and determination to exaggerate nothing. We believe that Mr. Baines is arranging now for starting upon a fresh expedition over the same regions to the Tatin, where he holds concessions of auriferous country from his friend the Matabili King. If practicable he will proceed further to explore the alleged buried cities of Ophir; and he will probably be accompanied by the Rev. Mr. Greenstock, of Port Elizabeth, who will travel partly for the benefit of his health and partly in the interests of the Society for the Propagation of the Gospel, to whom he will report on the condition and prospects of the tribes through whose country he may pass.

The Onyx Vase of Brunswick*.

After forty-four years' detention by the late Duke Charles, the Onyx Vase has at last returned to Brunswick, where it now remains as an inalienable family treasure, attracting, undoubtedly, once more the attention of archæologists and friends of art as it did when its existence was first made known towards the close of the seventeenth century through Latin treatises and artless pictures as

* With reference to the above we have received the following note:—"I have come across a most interesting history and description of that exquisite gem of art, "The Onyx Vase" of the House of Brunswick. It is written by Mr. Fiedler, and published in the *Allgemeine Zeitung*. I have translated it for the benefit of the readers of your *Magazine*, that is to say, if you deem it of sufficient general interest for insertion.—Yours very truly,—Schermbrucker."

one of the curiosities obtained from the museum of Mantua. How or when it came there, who was the artist, and for whom it has been made, what was its original destiny or use, what peregrinations it may have gone through ere it came to Mantua, are questions to which no one can give a decided answer. History is silent upon these points, and we have only conjectures and opinions without historical foundation. However, the fate of the Onyx Vase since it became first known to history has been a curious one, and the dangers to which it was exposed at sea and on land during the reign of the foreigners in Germany, together with the difficulties under which it was happily saved from the rapacious hand of Republican and Imperial France, are worthy of record, and may not be uninteresting to lovers of art.

Vincentio II., Duke of Mantua, and the last scion of the art-loving family of Gonzaga, died without issue in 1627. Ferdinand II., Emperor of the Holy Roman Empire, as husband of Vincentio's sister, claimed the right of succession to the Dukedom of Mantua against the pretender, Charles II. of Nevers, who was supported by France. Ferdinand sent an army, under the command of General Colalto, into Italy to take the strong fortification of Mantua, one of Colalto's generals being the Austrian Field-Marshal Duke Francis Albert, of Saxe-Lauenburg. After a siege of several months Mantua fell on the 18th July, 1630, and in conformity with the barbarous usages of those times the unfortunate town was given up to the fury of and plunder by the victors during three days. The richest booty was found in the ducal palace, which contained the most precious gems, jewels, and works of art, and from whence an Austrian soldier, amongst other things, obtained the Onyx Vase. Unconscious of the immense artistic value of his booty, the soldier regarding only the golden ornaments, and caring little for the exquisite chiselling or the value of the precious stones, sold the Onyx Vase for the miserable sum of one hundred ducats (about £50) to Field-Marshal the above-mentioned Duke of Saxe-Lauenburg.

All archæologists and mineralogists who have since then examined the vase, agree that the material of which it is made is a real precious stone known as onyx or sardony; and that the vase, cut out of one onyx stone of unusual size, is a masterpiece of antique art. The lid, handle, and foot, are worked in pure, solid gold. These parts excluded, the Onyx Vase measures $5\frac{2}{3}$ inches in length and $2\frac{7}{12}$ inches in diameter. The ingenious stonecutter fastened the handle to the outside of the stone by means of two golden rings, which encircle the vase and divide, as it were, the outside surface into three sections, of which the middle one forms the largest in height and periphery, presenting the most charming variety and brilliancy of colours. Upon this outer surface the artist engraved (chiseled) in haut relief, or cameo, twelve figures representing the scene of a sacrifice at the Eleusinian festivities. In like manner the

artist ornamented the upper part nearest to the orifice with fruits, leaves, and bulls' heads, emblematical of the sacrifice; and the lower part nearest the bottom with vases, fruit baskets, torches, serpents, and two human heads. After the Duke's death the Onyx Vase became by inheritance the property of his wife, a princess of Mecklenburg Güstrow, who bequeathed it again to her sister Sophia Elizabeth, third wife of the Duke August of Brunswick-Lüneburg, and it was by her made over by testament, bearing date 2nd September, 1668, to her son, the Duke Ferdinand Albrecht, surnamed "Der Wunderliche" (the odd one). This prince having taken up his residence in 1667 at Bevern, on the banks of the Weser, near Holzminden, became a most industrious collector of pieces of art, and erected at his castle in Bevern a special "chambre of art" for the preservation of his most valuable collection. The greatest treasure amongst his curiosities was, doubtless, the Onyx Vase, which he kept wrapt up in green velvet with silver cords in a little box richly ornamented with silk, and gold and silver lacing. Upon the Duke's special request the learned town clerk Eggeling of Bremen wrote a treatise in the Latin language describing the vase, and explaining the engravings under the title "Mysteria Cereris and Bacchi in vasculo et uno onyche et Bremae 1682, in quarto," to which was attached a picture of the vase, which is even now accepted as the best ever published, the whole being dedicated to his noble patron in Bevern. In opposition to Eggeling's interpretation of the engravings as representing a sacrifice peculiar to the Thesmophorian Mysteries we meet already in 1683 a learned argument by the librarian of the University of Leipzig and professor of poetry, Feller, who in his work "Acta eruditorum," Lipsiae, 1683, pp. 141—147, explains the engravings as referring to the Eleusinian mysteries, an explanation which has been accepted by most of the recent commentators. The controversy once started caused a justification by Eggeling in a pamphlet, "Censura censurae mysteriorum Bacchi et Veneris, not without personal invectives against Feller, who in an equally irate temper outdid his antagonist in scurrilities published as "Vindiciae adversus Eggelingü iniquissimam insulsissimamque censuram," Lipsiae, 1685; whereupon Eggeling, *ad honoris sui salvationem*, caused the publication of a pamphlet "Abstersio Fellerianarum calumniarum atque acerbissimarum injuriarum, Bremae, 1689," which seems to have stopped Feller's mouth, although it left the interpretation of the engravings on the Onyx Vase exactly where it was before the controversy. The like uncertainty exists as to the pecuniary value of this antique masterpiece. The valuations mentioned in diverse documents vary between 60,000, 90,000, and 150,000 Reichsthaler (1 R = 2s. 6d.), whereas an inventory of the ducal treasures in 1676 contains a marginal note valuing the Onyx Vase, without prejudice, at only 16,000 Rixdollars, to which our author makes a note, "probably meant for 160,000." The jeweller and graveur Hoelscher, called in

as taxator of the ducal gems and precious stones, and the author of the above-mentioned inventory, put down the Onyx Vase as "above all taxation," describing only the box and encasings; and, indeed, as a piece of art singular in its kind, and such as none other preserved from antiquity, the Onyx Vase is really beyond taxation, priceless and invaluable. The following is a condensed history of the great family treasure of the House of Brunswick. It remained in the Brunswick line of Bevern until May, 1738, when it was transferred to Wolfenbüttel by Duke Ernst Ferdinand, and so carefully guarded that the safe in which it was enclosed was never to be opened except in presence of the Duke or some nobleman authorized by the Duke to represent him. It appears that up to 1766 the Onyx Vase remained the joint property of both branches of the Brunswick family, when the reigning Duke acquired sole possession by paying as an equivalent the debts of the princes of Bevern, and since then it occupied the first rank amongst the treasures of the Brunswick museum. After the disastrous battles of Auerstädt and Jena (1806), in which Duke Charles William Ferdinand, as Commander-in-Chief of the Prussian army, was mortally wounded, the Duke had to leave his country with all his family, and brought the Onyx Vase for safety into Mecklenburg, and afterwards to Flensburg and Glücksburg. Meanwhile Napoleon advanced into Germany, took the Duke's brother, who served in Blucher's corps, prisoner; and being desirous of acquiring the Onyx Vase for the museum in Paris, offered 500,000 francs for the same, which sum should be deducted from the heavy contributions he levied upon Brunswick, but the offer was indignantly declined, and the Vase remained in custody of Duke George at Glücksburg, until Napoleon's alliance with the King of Denmark made it advisable to change the place of custody once more. Lieutenant-Colonel von Nordenfels undertook to bring it to London, and departed with his precious charge from Glücksburg on 23rd December, 1810, accompanied by only one faithful servant. The pass system being then strictly in force, Nordenfels had to submit to various examinations and visitations, but by many cunning devices, in which he was most ably supported by his servant, managed to get through all difficulties, and reached Colberg on the Baltic, where he waited until the ice broke, and took sail for Ystadt, in Sweden, on 26th March, 1811. Having had a narrow escape from being captured by French privateers cruising on the coast of Sweden, he landed at Ystadt, proceeded from thence overland to Göteborg, and took ship on board the English packet *Lady Auckland*, Captain Bridge, which had been held in readiness for him by the English Consul, on the 9th April. A tremendous storm nearly swamped the one-masted boat, which, instead of landing at Harwich, was driven to near Yarmouth, where the assistance of several boats was obtained. Captain Bridge, having special instructions regarding the safe conveyance of Nordenfels and his precious treasure, took him and his servant into a small boat, and undertook to row him to the shore.

Passing another boat on the way, they heard the news of Wellington's great victory in Spain, whereupon Captain Bridge and his two passengers jumped up, waved their hats, and gave a cheer, which once more endangered the life of Nordenfels and the fate of the Onyx Vase, for, unaccustomed to the rolling of the boat, Colonel Nordenfels lost his balance and went overboard. He was, however, quickly assisted, and regained the boat, which at last landed him safely at Yarmouth, from whence he went to London, and delivered the Onyx Vase to the Dowager Duchess Augusta, who died in London 13th March, 1813, and left it to Duke Frederik William, who, after the Battle of Leipzig, returned to his Dukedom of Brunswick, and replaced the Onyx Vase, in the following year, to its wonted place in the Museum, where it remained until the 7th September, 1830. The then reigning Duke Charles had on that day to fly before the fury of an enraged people, which had set fire to the ducal palace. But before quitting his territories the Duke obtained possession of the Onyx Vase, and took it with him to Paris, and afterwards to Geneva, where he died lately, leaving all his property to the town of Geneva. Immediately after Duke Charles's death, the now reigning Duke William claimed restitution of the Onyx Vase, but, to the great consternation of the claimants, the precious antique was not to be found. At last, after many weeks' fruitless searching, they came upon a cupboard containing, amongst a number of worthless pots and bottles, two metal vases, which, on being moved, attracted their attention on account of one being considerably heaver than the other. A careful examination of the heavier one led to the discovery of a longitudinal slit and a thread of flannel protruding through it at the bottom. It was carefully dissected, and found to contain the renowned Onyx Vase. Dr. Riegel, Director of the Brunswick Museum, in his capacity of deputy of the Duke of Brunswick, received it from the Commissioners of the Municipality of Geneva in the Town Hall of that city on the 27th March, 1874, together with the sapphire ring of Mary Stuart, which had likewise been extracted from the Museum by the late Duke Charles; and both these curiosities are now restored to the same places they occupied on that memorable 7th September, 1830, ere the late Duke had to expatriate himself as the condign punishment of his criminal extravagances.

Reminiscences of an Octogenarian.*

A FEW REMINISCENCES OF THE BLOODY AND TRAGICAL SCENES OF THE FIRST TWO DAYS OF THE FIRST KAFIR WAR OF 1834, AS THEY OCCURRED IN THE NEIGHBOURHOOD OF FORT BEAUFORT: BY JAMES COLLETT, SEN.

A FEW weeks ago I read an article in your Magazine, headed "Bailie's Grave," of more than ordinary interest to myself, as you may well imagine when I tell you the writer of it is my very, very old and much esteemed friend, and the subject of it, the late Charles Bailie, was also a valued and respected sporting friend of mine. In the early and by-gone years of the settlement we were both considered good shots, and passionately fond of sport. After reading it I decided, as I thought it my duty, on bearing my testimony to its veracity: his life and character is so correctly, graphically, and beautifully delineated, as none beside the writer now living could have penned. Almost everything there said of him I am fully conversant with, and with great pleasure embrace the present opportunity of bearing testimony to its every word of truth. I have been asked by a few friends to commit to paper for publication in the press the many bloody and cruel murders that occurred in the Fort Beaufort district, where I resided at the breaking out of the '34 war; my reply is, I have neither talent nor inclination now to do so, and I know I shall tax my defective memory to give correctly the first two days only of those never-to-be-forgotten dreadful scenes of murder and mangled bodies, and the burning homesteads, I then witnessed. On the 25th December, '34, the sun itself had an ominous appearance, as it rose unusually red, enveloped in apparent streaks of blood, unmistakably portentous of some dread calamity, and a dreadful day it proved, never to be forgotten by many a sorrowing family. I remember I had a foreboding on my mind that a Kafir war was inevitable; there was observable a restlessness among the Kafir tribes, a growing contempt for the Government, and especially for the Infantry soldiers, as well as a marked contemptuous bearing towards the white man generally. Still, notwithstanding all the far-seeing colonist had predicted, their inburst was nevertheless a sudden surprise to all, and came upon us like an unexpected thunder-clap, and none prepared in the least for the fearful shock. I would here digress for a moment to bear record to what Mr. Godlonton hath so truthfully and eloquently pourtrayed with a master-pen, far beyond my reach, with reference to the unexampled prosperity and peaceful

* We do not insert these Reminiscences for any particular excellence of style in their narration. But there is a quaint simplicity, combined with strong expressiveness, about them which gives them a peculiar and, in our opinion, a very valuable interest of their own. They are printed as they were written by their venerable author, Mr. Collett, with hardly an alteration of a word.—ED. *C. M. M.*

state of the whole Eastern Province at the time of the unprovoked and murderous inburst. On the Christmas morning, after breakfast, I was busily employed preparing for our Christmas dinner—not the old English roastbeef and plum-pudding—but legs of mutton and plum-pudding. I had just returned from the slaughter-house, where I had been cutting up two of the largest wethers I had seen before or since, and brought in for dinner four legs of a prodigious size, such as are rarely now seen, when a Hottentot came with the first tidings of the war, and stated that all the traders in Kafirland were barbarously murdered on their station,—Rogers, Budden, Warren, and many others whom I well knew. Then came the further news about Isaac Buys, living on the Kat River, the then boundary of the Colony, a most kind-hearted, quiet man, and friend of mine, that a party of about eight or ten murderous wretches—devils in human shape—came up to his door, and asked for tobacco, as they were wont to do, and while in the act of supplying their wants, one of them thrust an assagai deep into his body, beside the collar-bone, when he fell, without speaking a word, a lifeless corpse, surrounded by his dear wife and a very large family of children. Shortly after we saw several flocks of cattle and sheep being driven hastily along the road. The poor widow and her large family—something like eight or ten, all young—were wandering a whole day and night in the veld, with but little clothing to screen them from either sun by day or cold by night. At noon our bountiful dinner was put on the table, but very few seemed inclined to partake. I, however, partook of both leg of mutton and pudding, remarking that I should be all the stronger to face our treacherous foe. After hastily eating a little, I ordered my horse to be saddled, and rode along the Graham's Town road, in haste and anxiety to learn the fate of my wagon, which I had a few days previously sent to town for supplies, and to my sorrow soon learned my fears were more than realized, for I had only ridden a few miles along the Graham's Town road when I met my driver, Jacob, quite out of breath with running and fright. I knew at first sight, without asking him, what was the matter. "My dear sir," he exclaimed "turn back immediately or the Kafirs will surely kill you; they are here close by; they have taken my wagon and murdered my leader." He entreated me all he could not to go one step further or nothing could save me. I replied, "Escape, Jacob, for your life home; I am well mounted and will follow you; but I must first get a sight of my wagon." Nor had I gone far before my curiosity was grievously gratified. About fifty yards before entering the Koonap Drift, and about 200 yards on the other side there I saw my wagon, surrounded by about 100 Kafirs all busily employed, some cutting open and emptying the sugar bags, some tapping the wine casks, others smashing the cases of raisins, while a few were cutting up a 50-ell piece of linen and dividing it. I could easily have shot two or three of them to a dead certainty, and put my gun to my shoulder for that purpose, and with great reluctance did I take it down again

without pulling a trigger; but knowing them as I do to be a revenge ful people, the thought occurred to me if I shot any of their number they would at once pursue my poor driver, and his life would pay the forfeit. I have never forgotten when I left him to proceed towards the wagon with what anxious fear and solicitude for my safety, with the tears rolling down his cheeks, he exclaimed "Mijn leve baas, draai om, de Kafers wil jou dood maak." We, however, both reached home in safety, with the loss of all the supplies the wagon contained, and a great and terrible as well as irreparable misfortune it was at such a time, with the whole Frontier overrun with Kafirs in every part, and, as a consequence, a dead stop to all wagon travelling, and my family and large establishment without groceries or other necessary supplies to eat.

I had scarcely reached home when a wagon drove up to the door with another victim of Kafir treachery; it was the mangled body of a fine young man of the name of Engelbrecht, a son-in-law of Lombard's, being conveyed to his friends for interment; his poor body full of assagai wounds similar to all the unfortunate victims that fell into their bloody hands. In casting one's eyes towards Kat River, the smoke of a score of burning homesteads may be seen in one view, and among them the buildings on one of my farms, called Leoendfontein, had shared the common fate. They were, fortunately, not of great value, consisting of hartebeeste houses where two or three Dutch families had resided. The flood-gates seem now fairly opened in all directions, and no troops to arrest its devastating torrent; and what the end will be God only knows. It is a calamity as dark and mysterious as it is appalling and dreadful in its consequences. Large droves of cattle and sheep continue to pass, as also many wagons containing women and children escaping to some place of safety if they knew but where to find one; each wagon, as it halts for a minute, relating to us the story of a fresh murder just occurred. At four o'clock my neighbours, David Hobson's family, and flocks just arrived to join us; five o'clock my two nearest Dutch neighhours, Hendric and Marteena Becher, their families and flocks, just arrived, requesting permission to remain, to which request I at once acceded. The Dutch farmers are busy making large thorn kraals for their cattle, and forming encampments for mutual protection. I am fortunate in having strong stone kraals, but I expect the attempt on my cattle will be made in the veld by day, having ten armed men guarding the kraal during night, and only one entrance, and that through a pair of large doors. So bold an attempt could only be made at great risk of life. Having heard a shot fired, I mounted my horse and rode to my herds and found my faithful Faltien had just shot a Kafir. I told him in future he must only fire in defence of his life or my property. Every hour now brought on its fleeting wing news of some fresh murder. Commandant Piet Erastmus arrived a little before sunset with a patrol of about twenty men, and he at once willingly promised me assistance in the morning

to get up my wagon. Got all our flocks into the kraal safely, and planted my sentries for the night. I do not expect any attack will be made on us to-night, as we are very strong and too much on our guard. The wily Kafir will bide his time, but our cattle he will have. Oh how my heart bleeds with poignant sorrow for those poor unfortunate souls who had lost members of their families by the blood-stained assagai since the sun rose this morning; that were that evening plunged in grief for a loss that nothing could compensate, a poignant sorrow that nothing could assuage!

December 26, 1834.—The feelings of us all on this large establishment this morning may be imagined, but no pen can adequately describe them. Nothing but burning homesteads to be seen in every direction. Many bodies of Kafirs had evidently passed us in the night, and proceeded deeper into the Colony, but, fortunately, we were unmolested during the night. Erasmus and his men preparing to go and help me up with my plundered wagon. Fortunately we took the precaution to take with us two span of riems, for, as I anticipated, the trektouw was totally destroyed, being cut up into lengths of about three feet long. We started off and reached the empty wagon, plundered of all its, to us, invaluable contents; £500 would not have purchased the supplies it contained but a few days before. We set to work and quickly made a trektouw of our riems; but the drift we had to cross being rough and stony, our makeshift trektouw broke, and gave us trouble to repair in the middle of the stream. We, however, persevered. Amid danger and through all difficulty got safe home with our plundered wagon. On our road home seeing some vultures, I turned aside to see what it was, and to my grief found it to be poor Michael Delange, a most kind-hearted man and good neighbour, barbarously murdered, and full of assagai wounds like all their other victims, and thrown into a spekboom, lying on his back for birds of prey to devour, his features so distorted and his body so mangled I could scarcely recognze him, nor am I quite certain to this day if it was he.

The sun of the second day is now closing upon us. All the appalling scenes it has witnessed since it rose this morn are only known to God. I have very briefly and very imperfectly attempted to commit some few, comparatively few, of them to paper. I have heard during the last two eventful days of many other barbarous murders, but my defective memory and the lapse of years forbids my giving all their names, and the frightful particulars and heart-breaking circumstances under which they fell victims to treacherous barbarity scarcely paralleled in the world's history. On the evening of the second day's slaughter I had fondly hoped we had seen, heard, and felt the worst. Ah, little did I think this was but the beginning of an infinitely greater and more terrible calamity yet to come, and that I should have to suffer the loss of all my choice and well bred milch cows, and my picked and well-trained span of oxen, and my poor faithful Faltein murdered in defending them, barbarously murdered, having his poor

body stabbed all over with assagai wounds, and his head all but severed from his body when I found him lying on his face, on a starlight night, surrounded by my own setters and pointers. A further and more dire and dreadful calamity which followed in rapid succession, the Kafirs finding they could not possess themselves of my tempting flocks without loosing some of their number, determined at last to rush into the house by storm and put to death all the white people, calculating when they had effected their bloody purpose that all the coloured people would fly. Accordingly in the twilight of the evening they rushed into my sitting-room and sent an assagai into the body of Mrs. Jacob Trollip, and nearly through it, wounding her infant sucking at the breast. Hearing her screams, I hasted back from the cattle kraal, whither I had gone, as I thought, to get a shot at them there. The assagai had entered her right side, and pierced through the liver. She lingered in great agony a few hours, but expired before daylight in the morning. I had borne up hitherto against a succession of unparalleled calamities to the wonder of myself as well as others, but the drawing out the assagai from her bleeding side quite unmanned me.

And now, ere I close my hastily written tragical tale, truth and justice compel me to make a few brief remarks on the Government of that day; and the first thing that must strike the historian with alike wonder and surprise is their profound ignorance of the Kafir character, and that with all their agencies at command they knew little more than the man in the moon of the bloody plot entered into by all the chiefs in Kafirland until the devastating volcano had burst with destruction and irresistible fury, and swept all before it in every part of the Colony. The bare possibility of so fearful a calamity seems never to have occurred to them, or surely they would have provided some places of refuge on and along the border line, and that the intelligent and enterprising body of British Settlers should not be left exposed, unthought of, uncared for, and unprotected—men who were destined under Providence hereafter to be the pioneers of civilization, and mainly instrumental in raising this poor Colony into forming a part of a great Empire.

James Collett, Sen.

Mr. William Mann.

[In our last number we printed the letter latest received from Dr. Livingstone, addressed to his "dear friends, Maclear and Mann." A private note from Mrs. Mann, not intended for publication, contains the following striking passage, which on our own responsibility we venture to print:—"There is a strange coincidence in the events of that 29th April, 1873. It was some time before I could look again at the frontispiece of the 2nd vol. of the 'Last Journals,' so

vividly did it recall a scene—but for the wild surroundings, altogether the same—at Claremont. 'Afternoon, 29th April, 1873.' The last entry in my husband's diary was, 'Wrote to Dr. Livingstone.' It was the last letter he wrote." We take the present opportunity of putting on record in these pages the following memoir, furnished by the Royal Astronomical Society, of one of its best, most modest, and, in every respect, most worthy of its members.—Ed. *C.M.M.*

William Mann, late first assistant at the Royal Observatory, Cape of Good Hope, and attached to the staff of that Observatory during a period of thirty-two years, was the third son of Major-General Cornelius Mann, of the Royal Engineers. He was born at Lewisham, in Kent, October 25, 1817, and died at Claremont, near Cape Town, on the 30th of April, 1873, at the age of fifty-five years. He was elected a Fellow of this Society on the 10th of March, 1871.

The subject of this memoir was under the care of private tutors in England until 1830, when he was in the thirteenth year of his age. At that time his father received the appointment of Commanding Royal Engineer at Gibraltar, and he went with his family to that station, and continued his studies there, in the hope of entering in due time the Royal Military Academy at Woolwich. The regulations, however, prevented this, in consequence of his having an elder brother already in the Academy. He accordingly had to turn his attention to some other pursuit; and through the kind recommendation of Admiral Shirreff was ultimately appointed second assistant at the Royal Observatory at the Cape. He visited England to complete his preparations for the appointment in 1837, and joined the staff of the Royal Observatory in October 1839, being then twenty-two years old.

Mr. Mann took with him to the Cape various instruments and forms of apparatus that had been prepared for re-measuring La Caille's Arc of the Meridian. During the first six years of his service he was chiefly employed in operations connected with this work; under Mr. (now Sir Thomas) Maclear; and it was while so employed that his sterling value as a votary of science became apparent. He had great fondness for the higher branches of the mathematics, and great facility in applying their doctrines and methods, and with this natural aptitude he possessed also a remarkable skill in mechanical manipulations. In addition to these natural gifts he was persevering and patient to the last degree, and fastidiously scrupulous in the performance of all tasks of duty. While working upon the verification and extension of La Caille's Arc he was often exposed for months at a time in the wild country of the Clanwilliam district, lying between 200 and 300 miles north of the Cape, occasionally being three months without other shelter at night than the open sky. The kind of life he had to lead at this time is very graphically told in a brief extract from one of his letters, in which he describes how he established the station some seventy miles beyond the Sneeuwkop peak of the Cedar Mountains. A mountain had been seen over the broken Karoo country from the Sneeuwkop, in a north-eastern direction, which seemed likely to answer for a connected station; but the intervening tract of land was so difficult, and the means of transport so utterly insufficient, that it was out of all question to attempt to send a party of men to the place to establish

the signal. Mr. Mann, therefore, volunteered to make his way to the mountain, and to conduct the signals by himself. He accordingly started, with only one Hottentot attendant, a bag of rusks, and a map of the country. After three days' wandering through the wildest and most desolate territory, entirely destitute of water, he came providentially upon a small stream, late one evening, and slept on a bare rock near the base of the desired mountain. His narrative of his further proceedings is then continued in the following words: "Next morning I called a council of war, consisting of myself, to debate on what was to be done. I found there was bamboo enough to last the horses two days, and we two mortals might possibly exist that period upon the quantity of bread which remained; and as the time was precious in our operations, and if I left our present position I did not know how long we might be wandering about before we came to a house, I determined to make this my head-quarters. So leaving my servant in charge of the horses, I prepared to ascend the mountain for the purpose of making the necessary signals. I took with me two rusks, all that could be spared, and which were to last me as many days, and as much water as my pocket-pistol could hold, which was about one draught. I had about 2,000 feet of mountain to climb, and a heavy load to carry; and taking into account the heat of the weather, and the want of a breakfast, I was *rather* tired when I at last arrived at the top. I soon established my signal, and sat all the rest of the day reading it. I was obliged to fill my mouth with pebbles to keep it moist. Night came on, and, hungry and thirsty, I laid myself down to sleep. There was not a stone or a bush on the top to afford the least shelter; it blew a gale of wind, and the night was cold as the day had been hot. Next morning at sunrise I was again signalling away, and about noon to my great joy I saw the signal from Sneeuwkop station for me to leave! I was not long in packing up my traps and getting down the mountain. I found my servant and the horses looking very miserable, but cheered the former with the news that I had discovered with my telescope a farm-house a few hours off." He then goes on to tell how he made for the house, but alas! only to find it a ruined and deserted homestead. He finally reached the Sneeuwkop station, after three other days of painful travel. This little incident is worthy of extract, as illustrating in a forcible way what measuring an arc of meridian in the wilds of South Africa means. It is not surprising that even a naturally vigorous and good constitution felt the strain of such work and exposure as this. In the year 1846 Mr. Mann had to visit England for the restoration of his impaired health, and Mr. Maclear wrote upon that occasion:—"I feel the loss of Mr. Mann's services, especially at the present juncture. His powerful intellect, his unflinching integrity and industry enable me to trust him with confidence on all occasions and in every department, whether at the Observatory or on the Triangulation, being certain that whatever is practicable he will accomplish, and that what he does will be sure to be well done."

Mr. Mann returned to the Cape in improved health in 1847, and for the next five years was actively and incessantly engaged in the current work, both of observing and calculating, in the Observatory. In 1852 he was commissioned to proceed to England, to make himself acquainted with the mechanism of the large Transit Circle then constructing for the Cape. He returned to the Cape with this instrument in his charge, and

then proceeded to erect it at the Observatory, a work of considerable difficulty under the circumstances, as at that time there was absolutely no skilled labour of the class required at the Cape. If Mr. Mann had not been unusually skilful himself in the use of his hands and in the delicate application of tools, as well as familiar with every essential point in the mounting of the complicated instrument, the work would have had to stand over until artizans could be sent from England at very large cost. As it was, the noble Transit Circle, which is very nearly a duplicate of that in use in Greenwich, was mounted in a most complete and efficient manner. The writer of these lines remembers an interesting and notable illustration of the accuracy and skill with which this difficult task was performed, which he had from Mr. Mann himself in familiar conversation. In one part of the operations the exactness of the position had to be determined by the image of a central wire being reflected from a still surface of mercury. Mr. Mann, having had the pivots of the horizonial axis placed rudely in the position on the piers, was aghast to find that he had no image of the wire in the field of view. After some puzzle and some delay, to his inexpressible delight he found on tapping the tube that the reflected image was there, but concealed behind the wire. The work had been so perfectly planned and executed, and the instrument was so absolutely in place, that the wire intercepted its own reflected image. Mr. Mann had no other assistance in the erection of this large instrument than such as he could get from Hottentot workmen trained by himself.

About the year 1853 Mr. Mann married Caroline, the second daughter of Mr. Maclear, Her Majesty's Astronomer at the Cape, and so, as a member of the family of his chief, became more closely interested in, and more intimately indentified with, the Cape establishment.

At the latter part of the year 1859 Mr. Maclear paid a visit to England, and during his nine months of absence, the entire administration of the affairs of the Royal Observatory at the Cape was placed in Mr. Mann's hands. During that period he undertook the calculations that still remained necessary for completing the verification and extension of La Caille's Arc of the meridian. These calculations were ultimately carried through by Mr. Mann himself. About this time he entered very assiduously into comet work, which always had great attraction for him; and it was during the long exposures to cold winter nights incident upon this, and especially while observing Encke's Comet, that he incurred the first attack of a disorder of the chest, under which he has since fallen. In 1866 he made a short visit to Natal, on account of the severe suffering that asthmatic disorder had brought upon him, and in 1867 extended his trip to England for a further measure of rest and change. After six months' recruiting he returned to his work, considerably refreshed, and then entered upon the reduction of the Cape observations for the preceding thirty-four years. He also continued his comet work, and conceived an organized plan for the observation, reduction, and cataloguing of Southern stars, which, unfortunately, he was never able to carry through. Up to the year 1870, although unmistakably suffering from impaired powers, he was unintermitting in his application to the work of the Observatory. At this time he had to meet the additional depression and vexation incident to the retirement of Sir Thomas Maclear from his position as Astronomer-Royal at the Cape. Not long subsequently to this an outbreak of scarlet

fever occurred in the neighbourhood of the Cape, and visited the Royal Observatory. Two of Mr. Mann's children died of the disease, and he himself suffered so severely that his life was for some time in jeopardy. Under the great care of his family and friends he survived the actual attack, but was so broken down by it that he found it impossible to resume his work, and resigned his appointment, retiring with a small pension for his past services. At the end of the year 1872 he was further reduced by bronchial disease, and from that time, with occasional fluctuations, gradually declined, until the last day of April in the following year, when he sank quietly to his rest, after a useful life of hard labour, leaving a widow and a large family of children to mourn his loss. Shortly before his death Her Majesty had been pleased to grant him a small pension from the Civil List in recognition of his good service, but he was himself never aware of this gracious act. Mr. Gladstone very considerately ordered the payment of a sum equal to three years of his pension to Mrs. Mann.

Apart from the pursuits involved in his professional work and in his high mathematical and mechanical attainments, Mr. Mann had great fondness for archæological studies. He had a considerable knowledge of old coins, which he had studied in early life with his father. He had also some skill as an artist, and sketched from nature. The qualities, however, which will be most closely associated with his memory by his acquaintances and friends, are the singular combination of gentleness and strength, of modesty and power, which were present in all he did. There never was a man who moved through a thorny path in life, in which the growing needs of a large family had to be provided for out of too limited and inelastic means, with more patient and resolute courage. It was only the few who had the privilege of his intimate acquaintance who were aware of the remarkable intellectual vigour and strength, the clear and exact thought, and the large symphathies and attainments that lay behind the sweet ever-present smile, the gentle word, and the all but absolute forgetfulness of self, which at all times made up his personal presence, and gave, as it were, the key-note of his character. William Mann, of the Cape Observatory, had not the pushing, self-asserting qualities which most win the admiration of the world, and which most certainly command its substantial rewards. But he had the capacity and powers which would have given him a much more distinguished position than he attained if he had been more favoured by circumstances. As it is, he has the reward of a full recognition of honest work, ably performed through a long self-denying life, and the sorrowing memories of a small circle of appreciative friends, some among whom delight also in the consciousness that simple, unaffected, and unquestioning piety went hand-in-hand in his daily life with his remarkable intellectual aspiration and mental power.

R. J. M.

Answer to Mr. E. J. Dunn's Note on Geology.

It was not to be expected that the very serious charges which I had made against Mr. Dunn's map and geological accuracy would remain unanswered. That gentleman, after a six month's interval, has made an attempt in the January number of the *Cape Monthly* to answer *two—and only two*—of my strictures. And he does so as an "AUTHORIZED AUTHORITY. "He brings forward "Mr. Allport, the eminent petrologist," to rebut my views.

I know it is not customary to produce private documents, and in manuscript, too, as evidence in scientific matters. I might quote a letter in my possession from Dr. Cohen, received in December last, in which that gentleman (lecturer on mineralogy in the University of Heidelberg, author of *Die zur Dyas gehorigen Gesteine*, published in Heidelberg, 1872 – a treatise on the very rocks under discussion, and of the geological survey of Germany) agrees with me in the following words: "Real dolerite, *as much I know*, is not yet observed in the Colony." I shall refer the whole matter, however, to legitimate and published grounds; and I daresay as far as Dr. Cohen is concerned (whose champion I simply am in this controversy) in due time material will be published, which even Mr. Allport will not be able to gainsay. Mr. Allport may be "eminent," but I only find him quoted in connection with Mr. Daintree's papers on the Geology of Queensland, and now in the *Cape Monthly* of January – in a private communication. It is rather suggestive that Mr. Daintree sends Mr. Allport's hurried memorandum to the rescue of Mr. Dunn.

For those who are interested in this matter, I beg to draw their attention to the following facts: — Mr. Dunn confesses that he left a complete series of rocks in the British Museum. This was in January, 1874, or rather it must have been in December, 1873.* The head of the geological department is Prof. Maskeylyne, F.R.S., and his assistant is Dr. Flight (who was described to me as the best analytical mineralogist in England, when, like Mr. Dunn, I went to Europe to get some lessons in mineralogy). Now the former is quoted as an authority by Dunn in the Standard Treatise in Mineralogy, † and the describer of new minerals. Mr. Allport's name does not appear anywhere. Well, in the *Quarterly Journal* of June, 1875, there is a paper by Professor Maskeylyne and Dr. Flight, describing a new mineral from the Diamond-fields, which they have named *Vaalite*, and in this paper they specify the material left with them by Mr. Dunn. There is no mention of *Dolerite*; but at page 407 ‡ there is,—"At Bulfontein, where the diamondiferous rock is in contact with a narrow dyke of *Diorite*, *&c.*; and again, describing Du Toit's Pan, there is, "where the diamond bearing rock intervenes between the *Diorite* and the horizontal strata of shale;" and yet again, "The presence in intruded masses of *Diorite* . . . . all seem to point to a great disturbance of the original enstatic rock." Professor Maskeylyne and Dr. Flight are with me therefore in this controversy, and until Mr. Allport gives more than a hurried memorandum, and that without a trace of any chemical analysis, I think all candid readers will support my views on this subject.

But even according to Mr. Allport's views Mr. Dunn's map is wrong. No word is in it about Basalt, and yet mention is made of this rock in several instances in the "memorandum." Let us charitably conclude that Mr. Dunn's course of education in mineralogy, in London lately, did not admit of such distinctions as those between Dolerite, Basalt, and Diabase.

The second matter in Mr. Dunn's answer is even more unfortunate. He still claims to be the original propounder of the theory of the "Volcanic Pipes" of the Dry Diggings. He now ante-dates his claim, and declares that he published his views in 1871 at Cape Town. I am about tempted here to use strong language; but I shall merely say, that there is no reference in the pamphlet whatever to "Volcanic Pipes," "Vents," "Throats," or in any form to such a theory. There is, however, an extraordinary generalization to the effect that diamonds abound in the soil of Bultfontein, where it is permeated by "sand cracks." In that year it was, moreover, that he gave birth to his sand storm hypothesis to account for the occurrence of diamonds in the Dry Diggings. To those who are outside in this controversy I am glad to be in a position to show that I am also on this head supported by authority. In page 407 of the *Quarterly Journal of Geology* for 1874, Professor Maskeylyne says with reference to the Dry Diggings: "They were *first shown* by Dr. Cohen to have been probably "Volcanic Throats." * *

JOHN SHAW.

* *Quarterly Journal of Geology* for December, 1873. † *Descriptive Mineralogy*, page 665.
‡ *Journal of Geology* for 1874.

THE CAPE

MONTHLY MAGAZINE.

A Revised List of the Ferns of South Africa.

No separate account of the ferns of this part of the world has appeared since that contributed by Dr. Pappe and the Hon. R. W. Rawson to the *Cape Monthly Magazine* in November and December, 1857.

A little work on the ferns of Natal was indeed published by the late Mr. McKen, Curator of the Botanic Gardens at Durban, under the auspices of the Rev. J. Buchanan, an ardent and experienced Pteridologist, but its scope was limited strictly to that colony, and it is no guide to persons living in other parts of South Africa.

Messrs. Pappe and Rawson's paper remains, therefore, the only available authority on the subject, and it need scarcely be said that from the discoveries made during the eighteen subsequent years, no less than from the alterations in classification and nomenclature which have since been introduced, their Enumeration stands in much need of revision. The nomenclature and system of classification adopted in it was indeed avowedly based, in consequence of the non-completion at the time of Sir Wm. Hooker's Species Filicum, on the Tentamen Pteridographiæ of Professor Presl, whose names and arrangements were afterwards materially modified by Sir William in his elaborate work, and still more so in his "Synopsis Filicum," the first edition of which was published in 1868, shortly after the death of its author. The publication by Mr. J. G. Baker, of Kew, of a second edition of the "Synopsis" with additions and corrections up to date seems to afford an excellent opportunity for undertaking such a revision. For its accomplishment we have enjoyed peculiar facilities. His Excellency Mr. Rawson, on learning that the late Dr. Pappe's series of types, now in the Government Herbarium at Cape Town, was too incomplete to admit of the identification of species regarding which doubts had arisen, has kindly forwarded his own collection all the way from Barbadoes for examination and comparison. In this work we were aided by the Rev. J. Buchanan, to whom we are indebted also for a full set of Natal specimens.

We have also to thank Mrs. Barber of Highlands, Mrs. Kitton of King William's Town, Mrs. Holland of Port Elizabeth, Professor McOwan, Dr. Shaw, Mr. McGibbon, and Mr. H. Bolus, for some of the rarer specimens.

It is not proposed in the following pages to repeat the descriptions of the various ferns as originally given by Pappe and Rawson, or even to correct or supplement them by quotations from later authorities. This would appear to be a work of supererogation at the present day, as they are all fully described in the "Synopsis Filicum" already alluded to,—an invaluable compendium, to be found in most of the public libraries of the Colony, and which ought to be in the hands of every one who takes an interest in this graceful and diversified class of plants.

A systematic catalogue, therefore, of their names as given in that work, accompanied by a reference to the names or synonyms in the Enumeration of Pappe and Rawson, is all that is here aimed at, except in some few cases where special explanations seemed requisite. The principal localities where the rarer kinds may be found growing are however still indicated for the benefit of collectors.

The Lycopodiacæ which were included by Pappe and Rawson have been omitted, as, though closely allied to the Ferns, they do not belong to that family, and are not therefore given in the "Synopsis Filicum."

An asterisk is prefixed to such ferns as are natives of South Africa alone. A second asterisk denotes those which are also found in the adjacent Mascarene Islands, but not elsewhere. The abbreviations P. & R. and Syn. Fil. are used respectively throughout for Pappe and Rawson's enumeration of South African Ferns, as published in the *Cape Monthly Magazine* in 1857, and for the second edition of Hooker and Baker's "Synopsis Filicum" published in London by Hardwicke last October.

GLEICHENIA.

1. *G. polypodioides*, P. & R., 1; *G. argentea*, P. & R., 2, is now reckoned merely a variety. Hab.—Throughout South Africa from Table Mountain to Natal.

*2. *G. umbraculifera*, *Mertensia umbraculifera*. P. & R., 3; Hab.—Kaffraria and Natal.

3. *G. dichotoma*, not in P. & R., re-discovered recently by Rev. J. Buchanan. Hab.—Natal. Transvaal.

CYATHEA.

*4. *C. Dregei*, P. & R., 4; *C. Burkei*, P. & R., 5, from the Macalisberg, is now united. Hab.—Kaffraria, Natal, Transvaal.

HEMITELIA.

5. *H. Capensis*, *Alsophila Capensis*, P. & R., 6; the common tree ern. Hab.—Throughout South Africa.

WOODSIA.

* 6. *W. Burgessiana*, not in P. & R.; *W. mollis*, mentioned by Mr. McKen, is no doubt the same fern. Hab.—Eastern Province Natal, and Transvaal.

HYMENOPHYLLUM.

7. *H. rarum*, P. & R., 136, in common with the various species of this and the following genus, grows in moist and shady places, found in Natal by Guenzius, and called *H. Natalense* by V. D. Bosch. Mr. Buchanan has never seen specimens from that Colony. Hab.—Throughout South Africa.

8. *H. gracile*, not in P. & R. or in McKen's list. Found in the Rawson Herbarium by Mr. Baker, labelled by Mr. Sanderson of Natal as *Trichomanes Filicula*. Hab.—Natal.

9. *H. obtusum*, not in P. & R., first found by Colonel Blagrave. The Cape Habitat is omitted in the last edition of the "Synopsis Filicum," the reason is unknown, as copious specimens exist. Hab.—Table mountain only.

10. *H. Tunbridgense*, P. & R., 135; *H. peltatum*, Kuhn. *Hab.*—Throughout South Africa.

11. *H. lineare*, not in P. & R. Hab.—Macamac, Gold-fields, Transvaal; specimens recently sent by Mr. Ayres. A tropical American fern, not previously found in the South African continent, though occurring in the Mascarene Islands.

TRICHOMANES.

12. *T. pusillum var. quercifolium*, not in P. & R. Hab.—Natal.

13. *T. Filicula*, P. & R., 137. Though given in the Synopsis as a South African fern, the specimens so named, seen by Mr. Buchanan and ourselves belong to the following species. Hab.—Throughout South Africa.

14. *T. pyxidiferum*, P. & R., 138. Hab.—Throughout South Africa.

15. *T. rigidum*, P. & R., 139. Hab.—Natal.

16. *T. digitatum*, not in P. & R. Mr. Baker remarks: "This is given as a Cape plant on Dr. Brown's authority." We are not aware that any specimens exist in the Colony.

DAVALLIA.

* 17. *D. nitidula*, P. & R., 60. The D. *elegans* of McKen is only a variety. Hab.—Natal, St. John's River (Sir Henry Barkly).

18. *D. Speluncæ*, *Miscrolepia polypodioides*; P. & R., 59. Hab. —Natal and Transvaal.

19. *D. thecifera*, *D. concinna*; P. & R., 61. Hab.—Knysna, Eastern province, and Natal.

CYSTOPTERIS.

20. *C. fragilis*, P. & R., 23. Hab.—Eastern Province and Natal.

LINDSAYA.

21. *L. ensifolia*, P. & R., 62. Hab.—Natal.

ADIANTUM.

22. *A. capillis-Veneris*, P. & R., 89. Hab.—Table Mountain, Kat River, and Natal.

23. *A. Æthiopicum*, P. & R., 90. Hab.—Common throughout South Africa.

24. *A. caudatum*, not in P. & R.; is said in the Synopsis to come from the Cape Colony, but it seems doubtful whether it was found south of the tropics.

25. *A. reniforme var. asarifolium*, not in P. & R. The Rev. J. Buchanan has recently received from the Drakensberg Mountains specimens of this fern, which had never previously been found on the South African continent; as, however, they are not in seed, it is impossible to speak positively.

LONCHITES.

26. *L. pubescens*, *L. Natalensis*; P. & R., 109 and 110; *L. glabra*. Hab.—George, Knysna, and Natal.

HYPOLEPIS.

27. *H. anthriscifolia*, P. & R., 107; *H. aspera*, 108, is merely a variety. Hab.—Throughout South Africa.

* 28. *H. Bergiana*, *Cheilanthes Bergiana*; P. & R., 96 and also the *Cheilanthes elata*, 97, of Rawson's Herbarium. Hab.—Throughout South Africa.

CHEILANTHES.

29. *C. pteroides*, P. & R., 91; the "Myrtle Fern" of the colonists. *Hab.*—Table Mountain and its vicinity, said by P. & R. to come also from Natal, though not given in McKen's list or found by Mr. Buchanan. We have it from the Orange Free State.

* 30. *C. capensis*, P. & R., 92. Hab.—Common near Cape Town, and in many parts of the Cape Colony; very rare in Natal. Not in McKen's list. Transvaal.

31. *C. hirta*, P. & R., 98; *C. glandulosa*, P. & R., 99; and also *C. refracta*, P. & R., 94; and *C. cornuta*, P. & R., 103, according to the specimens in Rawson's Herbarium. Hab.—Throughout South Africa, common.

32. *C. multifida*, P. & R., 93. Hab.—Rocky and stony places throughout South Africa; particularly fine in Meering's Poort.

* 33. *C. induta*, P. & R., 100, distinguished from the preceding by its running root. Hab.—Sneeuwbergen Dregé, and Springbok and Bowesdorp, Namaqualand. (Sir Henry Barkly.)

PELLÆA.

* 34. *P. auriculata*, *Allosorus auriculatus*; P. & R., 82. Hab.—Environs of Table Mountain, Mitchell's Pass, and Namaqualand. (Sir H. Barkly.) Said by Kuhn to have been found in Natal.

35. *P. geraniæfolia*, *Pteris pedata*; P. & R., 63. Hab.—Eastern Province and Natal.

* 36. *P. deltoidea*, *Cheilanthes deltoidea*; P. & R., 101. Hab.—Namaqualand.

** 37. *P. pectiniformis*, not in P. & R. Hab.—Natal, discovered by Mr. Buchanan.

* 38. *P. involuta*, *Cheilanthes profusa*; P. & R., 102. Hab.—Namaqualand, and in some very dry situations elsewhere. The specimens in Rawson's Herbarium from Buffeljagt's River do not appear to us to agree with the description in the Synopsis, though they were passed as such at Kew; but Mr. Bolus has sent us one from Graaff-Reinet which does so.

* 39. *P. robusta*, *Cryptogramma robusta*; P. & R., 88. Hab.—Common throughout Namaqualand.

* 40. *P. Boivini*, not in P. & R. Hab.—Macalisberg, Transvaal.

41. *P. andromedæfolia*, *Allosorus andromedæfolia*; P. & R., 83. Hab.—Kendo (Dregé). Not seen by Mr. Rawson nor by us.

42. *P. consobrina*, *Allosorus consobrinus*, P. & R., 84, 104; *Cheilanthes triangula*, P. & R.; *Cheilanthes Atherstoni* 104. Hab.—Throughout South Africa.

* 43. *P. lancifolia*, stem densely tufted, castaneous like the rachis, 2–3 inches long, with only a few minute linear scales at the very base; fronds lanceolate bipinnatifid or bipinnate, 4–5 inches long, 12–15 lines broad at the middle, narrowed to both ends; pinnæ 10–12 jugate, patent, subsessile, the upper simple, the central ones the largest and most developed, $\frac{3}{8}$–$\frac{1}{2}$ inch broad, lanceolate-deltoid, cut down to a flattened rachis into 2–3 pairs of oblong-deltoid pinnules, which are either adnate by their whole base or nearly so; texture membraneous; both sides bright green and quite naked, as also is the fragile castaneous rachis; involucre continuous greenish half a line broad, crenated both on the inner margin and edge of the frond. Closely allied to *P. involuta (P. profusa, J. Smith)* from the same country, from which it differs by its less divided lamina, naked stipes and rachis, and remarkably broad involucre. Hab.—Foot of Kamiesberg, Namaqualand.

* 44. *P. Namaquensis.* Stems densely tufted castaneous, 2–3 inches long, clothed throughout with distant spreading minute linear scales; rachis castaneous, with a few minute scales of the same kind; fronds lanceolate-deltoid, 2–3 inches long, tripinnatifid the 6–8 jugate pinna growing gradually smaller and less compound from the lowest to the highest, the former distinctly stalked, erecto-patent deltoid bipinnate $\frac{1}{4}$ to $\frac{1}{2}$ inch broad, sub-equal at the base, the lowest pinnules lobed or even cut down to the rachis into a few close entire

N.B.—The two preceding new species of Pellœa were discovered by Sir Henry Barkly in Namaqualand, and as they were just too late for insertion in the second edition of the "Synopsis Filicum," Mr. Baker described them in the *Journal of Botany*, July, 1874, from which it was thought better, under the circumstances, to make the above extract.

blunt segments; texture firm, membraneous; both sides bright green and naked; involucre continuous, similar to that of the other species but not more than half as broad. About midway between *P. involuta* and *P. consobrina* in cutting and general aspect. Hab.—Foot of Kamiesberg, Namaqualand.

45. *P. hastata*, *Allosorus hastatus*; P. & R., 80, 85; *Allosorus corüfolius*, P. & R., *Allosorus Capensis*, P. & R., *Cheilanthes firma*, P. & R., *Cheilanthes lineraris*, 86, 105, 106. Hab.—Throughout South Africa. *P. viridis*, McKen is a synonym.

46. *P. calomelanos*, P. & R., 81. Hab.—Throughout South Africa.

*47. *P. leucomelas*, not in P. & R.; not known to us. Hab.—Cape Colony and Transvaal.

**48. *P. Burkeana*, not in P. & R. Hab.—Natal and Transvaal.

PTERIS.

** 49. *P. longifolia*, not in P. & R. Hab.—Natal & Transvaal.

50. *P. cretica*, P. & R., 64. Hab.—Throughout South Africa.

51. *P. quadriaurita*, *P. catoptera*, P. & R., 66; *Campteria biaurita*, P. & R., 79. Hab.—Natal and Transvaal.

52. *P. flabellata*, *P. arguta*, P. & R., 65. Hab.—Throughout South Africa.

53. *P. tremula*, not in P. & R.; a specimen in Rawson's Herbarium, marked *P. Caffra* Pappe, is referred in the Synopsis to this fern.

54. *P. acquilina*, *Allosorus acquilinus*, P. & R., 87; the common "bracken." Hab.—Throughout South Africa.

55. *P. incisa*, P. & R., 67. Hab.—Throughout South Africa.

56. *P. marginata?* not in P. & R.; is given in Syn. Fil. as a Kaffrarian fern. Mr. Rawson's Herbarium contains specimens from the Tzitsikamma Forest, marked *P. serrulata*, Pappe, which Mr. Baker pronounced to be this fern, although he has forgotten to make the correction in his new edition, where *P. serrulata* still figures as a South African species. We subsequently discovered the same fern at the Knysna; and Mr. Buchanan has likewise found it in Natal. The latter gentleman informs us that Mr. Baker now proposes, chiefly on account of its camptericid venation, to make it a separate species, under the name of *P. Buchanani*.*

LOMARIA.

57. *L. discolor*, not in P. & R. Hab.—Natal.

58. *L. attenuata*, P. & R., 73; P. & R., 71, *L. heterophylla*; P. & R., 78, *L. decepiens*. Hab.—Throughout South Africa.

59. *L punctulata*, P. & R., 75; P. & R., 74, *L. inflexa*; P. & R., 58, *Scolopendrium Krebsii*; P. & R., 26, *Blechnum Atherstoni*; the two latter, now referred to *L. punctulata*, are most extraordinary abnormal forms. Hab.—Common throughout South Africa.

60. *L. procera*, *L. capensis*, P. &. R., 68. Hab.—Throughout South Africa.

61. *L. Boryana*, P. & R., 69; P. & R., 70, *L. Dalgairnsii*; P. & R., 72, *L. cycadoides*. Hab.—Throughout South Africa.

N.B.—*L. Spicant*, P. & R., 77, is not in the Synopsis as a South African fern, and rests on doubtful authority.

BLECHNUM.

** 62. *B. australe*, P. & R., 76. Hab.—Throughout South Africa.

ASPLENIUM.

* 63. *A. Krausii*, *A. dentatum*, P. & R., 139. Hab.—Natal, Transvaal, and lately sent from Graaff-Reinet by Mr. Bolus, under the name of *A. Macleayi*.

** 64. *A. Sandersoni*, not in P. & R. Hab.—Natal—Amatola Mountains, Kaffraria (Mrs. Kitton).

65. *A. Trichomanes*, P. & R., 38.—Thoughout South Africa, but by no means common.

66. *A. monanthemum*, P. &. R., 36. Hab.—Throughout South Africa.

67. *A. lunulatum*, P. & R., 35; P. & R., 33, *A. erectum*; P. & R., 31, *A. brachyotus*; P. & R., 34, *A. Zeyheri*; P. & R., 48, A. *lobatum*; P. &. R., 49, *A. gracile*, a very variable fern, heretofore generally known as *A. erectum*. Hab.—Common throughout South Africa.

68. *A. ebeneum*, P. & R., 37. Hab.—Throughout South Africa, rare.

* 69. *A. Prionitis*, P. & R., 28. Hab.—Eastern Province and Natal.

70. *A. anisophyllum*, P. & R., 30. Hab.—Kaffraria and Natal.

71. *A. Serra var Natalensis*, not in P. & R. Hab.—Natal; Mr. Buchanan.

** 72. *A. gemmiferum*, P. & R., 27; P. & R., 29, *A. discolor*; P. & R., appendix 3, *A. flexuosum* is the cut variety of this fern. Hab.—From the Knysna to Natal.

73. *A. dimidiatum*, not in P. & R. Hab.—A West African fern, found by us at the Knysna.

74. *A. protensum*, P. & R., 32. Hab.—From the Knysna to Natal.

* 75. *A. Gueinzianum*, not in P. & R. or McKen; not known to us; originally called *A. laciniatum* by Kuhn. Hab.—Natal.

* 76. *A. Rawsoni*, not in P. & R.; gathered by Mr. Rawson on the Muizenberg Mountain, after his list had been published, and sent to Kew in his Herbarium under the name of *A. ruta muraria*; only one plant was found, and further search has proved vain.

77. *A. adiantum nigrum*, P. & R., 46. Hab.—Common throughout South Africa.

* 78. *A. solidum*, P. & R., 44, is a variety of the preceding, with

which it should undoubtedly be joined. From the coast at George to Kaffraria, but not in Natal.

79. *A. cuneatum*. P. & R., 43. Hab.—Eastern Province and Natal.

* 80. *A. splendens*, P. & R., 45. Hab.—Kaffraria and Natal.

81. *A. furcatum*, P. & R., 41; P. & R., 40, *A. præmorsum;* the *A. lacerpitüifolium* of McKen is, according to the Synopsis, a tripinnate variety. Hab.—Throughout South Africa.

82. *A. varians*, *A. fimbriatum*; P. & R., 42. Hab.—Eastern Province and Natal.

83. *A. bulbiferum*, not in P. & R. or McKen. Hab.—Natal; not known to Mr. Buchanan.

84. *A. cicutarium*, not in P. & R.; *A. rhizophyllum* of McKen is, according to Kuhn, on the authority of specimens collected by Mr. Sanderson in Natal, this fern. Hab.—Macalisberg, Transvaal, Natal.

** 85. *A. brachypteron*, not in P. & R. Hab.—Natal.

* 86. *A. Dregeanum*, P & R., 50; doubtfully distinct from the preceding. Hab.—Natal.

87. *A. flaccidum*, *A. Odontites*, very rare; P. & R., 52. Hab.—Found by Thunberg at the Cape, and by Mr. Sanderson at Natal.

88. *A. rutæfolium*, P. & R., 54; P. & R., 53, *A. Stans*. Hab.—Throughout South Africa.

* 89. *A. Thunbergii*, P. & R., 51. Hab.—Natal.

90. *A. Filix-fœmina*, not in P. & R. Hab.—Natal; Basutoland. (Sir H. Barkly).

91. *A. asipidioides*, *A. laxum*; P. & R., 24. Hab.—Throughout South Africa.

92. *A. ceterach*, *Ceterach officinarum*, P. & R., 155; very rare, though *Gymmgramme cordata* is often mistaken for it. Hab.—Griqualand.

ACTINIOPTERIS.

93. *A. radiata*, P. & R., 25; *Blechnum radiatum*. Hab.—Griqualand West, Transvaal.

DIDYMOCHLÆNA.

94. *D. lunulata*, *D. dimidiata*; P. & R., 22. Hab.—Natal.

ASPIDIUM.

95. *A. aculeatum*, *Polystichum angulare;* P. & R., 19; and P. & R., 18, *P. luctuosum*, which is now considered merely a variety. Hab.—Eastern Province and Natal.

* 96. *A. pungens*, *Polystichum pungens*; P. & R., 17. Hab.—Common throughout South Africa.

97. *A. Capense*, *P. coriaceum*; P. & R., 20. Hab.—Common throughout South Africa.

98. *A. aristatum*, not in P. & R.; *A. frondosum* of McKen's List is, according to Mr. Buchanan, the same fern. Hab.—Natal.

99. *A. falcatum*, *Cyrtomium falcatum*; P. & R., 21. Hab.—Eastern Province Natal, and Transvaal.

NEPHRODIUM.

100. *N. albo punctatum*, not in P. & R. Hab.—Natal; discovered there by Mr. Buchanan.

101. *N. conterminum*, not in P. & R., nor in McKen's list; not given in the Synopsis as a South African fern; but Mr. Baker, in a letter to Mr. Buchanan, states that specimens of what has been called *Polypodium obtusilobum*, but on which the latter had detected an involucre, "are one of the forms of this common New World fern." Hab.—Natal.

* 102. *N. Bergianum*, *L. patens*, P. & R., 8; *Polypodium Bergianum*, P. & R., 113; *Aspidium Gueinzianum* of Kuhn, according to Mr. Buchanan, is not to be distinguished. Hab.—Throughout South Africa.

103. *N. thelypteris*, P. & R., 7. Hab.—Throughout South Africa.

104. *N. filix-mas*, *Lastrea pentagona*, P. & R., 12; not in McKen's list. There is a single specimen in the Government Herbarium, Cape Town.

105. *N. spinulosum*, P. & R., 11. Hab.—Du Toit's Kloof, Swellendam, according to Rawson. Transvaal.

* 106. *N. athamanticum*, P. & R., 13. Hab.—Cape Colony to Natal; rare in former.

* 107. *N. inæquale*, P. & R., 10. Hab.—Throughout South Africa.

** 108. *N. catopteron*, P. & R., 9. Hab.—Natal only, according to P. & R., but found by us at George and the Knysna.

** 109. *N. Buchananii*, not in P. & R.; *L. oppositum*, 2; Appendix (?) Hab.—Natal, discovered by Mr. Buchanan.

110. *N. unitum*, *N. Ecklonianum*; P. & R., 15; and, 16, N. *Plantianum*. Hab.—Throughout South Africa.

111. *N. molle*, not in P. & R. Hab.—Natal and Transvaal.

N.B.—*N. elatum*, not in P. & R. Mr. Baker seems now disposed to consider the specimens which he at first named thus as only a luxuriant form or *N. molle*.

NEPHROLEPIS.

112. *N. acuta*, not in P. & R. Hab.—Natal.

OLEANDRA.

** 113. *O. articulata*, P. & R., 14. Hab.—Natal and Transvaal.

POLYPODIUM.

P. obtusilobum, not in P. & R.; still stands in the Synopsis as a Natal fern on the strength of Mr. Buchanan's authority; but, as already explained under No. 101, *N. conterminum*, this is a mistake.

114. *P. proliferum*, not in P. &. R. Hab.—Natal.

**115. *P. unitum*, *Goniopteris sylvatica*, P. & R., 114. Hab.—Natal.

116. *P. vulgare*, P. & R., 12. Hab.—Throughout South Africa.

* 117. *P. ensiforme*, *Marginasia ensiformis*, P. & R., 115.

Hab.—Forests of Swellendam and of Knysna, and collected also by Guenzius on the Tugela River, Natal.

118. *P. incanum*, *Pleopeltis Ecklonii*; P. & R., 117. Hab.—Knysna, Eastern Province, Natal, and Transvaal.

** 119. *P. Africanum*, *Niphobolus Africanus*; P. & R., 152. Hab.—Kaffraria and Natal.

* 120. *P. Schraderi*, *Phymatodes elongata*; P. & R., 121. Hab. —Knysna, Eastern Province, and Natal.

121. *P. lineare*, not in P. & R. Hab.—Kaffraria and Natal.

122. *P. normale*, not in P. & R.; *P. Pappei* of Kuhn. Mr. Baker observes, "*not always easy to distinguish from the large forms of P. lineare.*" Mr. Buchanan doubts whether both are found in South Africa. Hab.—Kaffraria and Natal.

123. *P. lanceolatum*, *Pleopeltis lepidota*; P. & R., 116. Hab.—Throughout South Africa. A curious pinnatifid variety is found in Natal.

124. *P. lycopodioides*, *Pleopeltis lycopodioides*; P. & R., 118. Hab. —Natal. *P. Mackenii* of McKen's List is now considered to be merely a variety.

125. *P. irioides*, P. & R., 120. Hab.—Mouth of the St. John's River (Sir H. Barkly) and Natal.

126. *P. phymatodes*, *Phymatodes vulgaris*; P. & R., 119. Hab. —Natal.

NOTHOCHLÆNA.

* 127. *N. Rawsoni*, P. & R., 128. Hab.—Between Specktakel and Komaggas, Namaqualand, Rev. Mr. Whitehead, 1856; not since found.

* 128. *N. inæqualis*, P. & R., 129. Hab.—Natal and Transvaal.

* 129. *N. Eckloniana*, P. & R., 127. Hab.—Throughout South Africa.

* 130. *N. Buchanani*, not in P. & R. Hab.—Natal, discovered by Mr. Buchanan.

MONOGRAMME.

** 131. *M. graminea*, not in P. & R. or McKen, and not known to Kuhn. Hab.—Cape Colony, according to Syn. Fil.

GYMNOGRAMME.

132. *G. Totta*, P. & R., 123; *Grammitis Totta*. Hab.—Throughout South Africa.

** 133 *G. cordata*, *Ceterach cordata*, P. & R.,157, and P. & R., 56, *Ceterach Capensis*; *G. Namaquensis*, 125, is a more pinnatifid variety. Hab.—Throughout South Africa.

134. *G. leptophylla*, P. &. R., 126. Hab.—Found only near the waterfall on the Devil's Mountain, Cape Town.

** 135. *G. argentea*, *G. conspersa*; P. & R., 124. Hab.—Natal, Transvaal.

136. *G. lanceolata*, not in P. & R. Hab.—Natal.

VITTARIA.

137. *V. lineata*, P. & R., 111; P. & R., 130, *Pteropsis angustifolia*. Hab.—Throughout South Africa; by no means common.

ACROSTICHUM.

138. *A. conforme*, *Olfersia conformis*; P. & R., 133; P. & R., 132, *Olfersia augustata* is a variety. Hab.—Throughout South Africa. Mr. Buchanan now considers McKen's *A. viscosum* to be this fern. We have never seen *A. viscosum* from Natal.

139. *A. hybridum*, not in P. & R. Hab.—Natal.

140. *A. Aubertii*, not in P. & R. Hab.—Natal.

141. *A. spathulatum*, not in P. & R. Hab.—Natal.

** 142. *A. tenuifolium*, *Stenochlena Meyeriana*; P. & R.. Hab. —Natal.

143. *A. aureum*, *A. inæquale*; P. & R., 134. Hab.—Natal, Algoa Bay.

OSMUNDA.

144. *O regalis*, P. & R., 144. Hab.—Throughout South Africa.

TODEA.

145. *T. barbara*, *T. Africana*; P. & R., 145. Hab.—Throughout South Africa, common.

SCHIZEA.

* 146. *S. tenella*, P. & R., 141. Hab.—Throughout South Africa.

* 147. *S. pectinata*, P. & R., 140. Hab.—Cape Colony, Natal; doubtful.

ANEMIA.

* 148. *A. Dregeana*, P. & R., 142. Hab.—Natal.

MOHRIA.

** 149. *M. caffrorum*, *M. thurifraga*; P. & R., 143. Hab.—Throughout South Africa.

MARATTIA.

150. *M. fraxinea*, *M. salicifolia*; P. & R., 146. Hab.—Cape Lakes at George, Tzitsikamma Forest, and Natal.

OPHIOGLOSSUM.

151. *O. vulgatum*, *O. nudicaule*, P. & R., 147; *O. costatum*, P. & R, 150. Hab.—Throughout South Africa.

152. *O. reticulatum*, P. & R., 149. Hab.—Throughout South Africa.

* 153. *O. Bergianum*, P. & R., 148. Hab.—Only found at the base of the Lion Mountain and near Kuil River, Cape District; very rare.

On looking over the foregoing list, it will be found that forty-one

species not enumerated by Pappe and Rawson have been added, ten of them being absolutely new. Yet, notwithstanding this, the total number of South African ferns is only raised from 150, as stated by them, to 153. This apparent discrepancy is explained by the fact that many which figured in their enumeration under four or five different names, are now entered under one. Thus, for example, *Cheilanthes hirta*, *C. glandulosa*, *C. refracta*, and *C. cornuta* are all now united under the first designation; while *Asplenium lunulatum* is held to include *A. erectum*, *A. Zeyheri*, *A. brachyotus*, *A. lobatum*, and *A. gracile*. The reason is, that whereas it was formerly the custom to erect every strongly marked variety into a separate species, modern pteridologists, with the aid of the more copious herbaria available at the present day, are enabled to trace such abnormal forms by insensible gradations up to a common and still existing stock. As such varieties are in most cases of merely local occurrence, their insertion as distinct species in the Enumeration had the further effect of unduly augmenting the numbers described as peculiar to this country. Partly from this cause, and partly owing to the subsequent collection and comparison of specimens from all parts of the world, that number, instead of being, as stated in Pappe and Rawson's introductory remarks, eighty-eight—or more than half of the whole—can in reality only be reckoned as thirty-seven, or less than one-fourth; whilst those confined to South Africa and the adjacent Mascarene Islands must be reduced from thirty to fifteen. These reductions, serve, however, but to confirm their assertion that the ferns are on the whole but poorly represented in South Africa, either in proportion to the rest of its flora, or as compared with those of other countries. In proof of the latter, it may be mentioned that the little Island of Mauritius—which is scarcely a thousandth part of the size of the vast area included in the Cape Colony, Griqualand West, the Orange Free State, the Transvaal Republic, Zululand, Natal, and Independent Kaffraria—contains quite as many species.

This of course arises from the great dryness of the climate of the Cape, and the small area covered by forests, though in this respect there is much difference between the several countries above named; the damp breezes of the Indian Ocean fostering the growth of luxuriant vegetation in the shady kloofs of the mountain ranges of the East; whilst the regions bordering on the Atlantic, as well as the elevated table lands of the interior, are comparatively arid and treeless.

As regards fern distribution, in fact, the southern portion of the African continent may be conveniently divided into four districts, two stretching to the western and two to the eastern coast. The first—comprised between Cape Point and the adjacent headlands, and the mountain ranges which trend from west to east, at a distance of fifty to sixty miles from the sea—is the region of what is generally termed by botanists the Table Mountain Flora. It is

tolerably rich in ferns, containing perhaps a third of the total number. Of these, eight species, viz. :—

Hymenophyllum	*obtusum*
Trichomanes	*digitatum*
Asplenium	*Rawsoni*
Nephrodium	*spinulosum*
Monogramme	*Graminea (?)*
Gymnogramme	*leptophylla*
Schizea	*pectinata*
Ophioglossum	*Bergianum*

are not found in the other regions; two of them, moreover (the third and the last), growing nowhere else in the world; whilst *Monogramme Graminea*, whose habitat here is somewhat doubtful, is shared only with the Mascarene Isles.

The occasional discovery, on the remote limits of Natal and Basutoland, of single plants of some of the ferns common in this region, but absent from the intervening ones, such as *Cheilanthes pteroides*, *Pellœa auriculata*, &c., would seem to indicate that the Table Mountain Flora occupied at one time a much wider area, unless, indeed, the presence of such "outliers" be attributed merely to similarity of soil, just as the Proteaceæ recur on the Katberg, at the gates of the St. John's River, the Transvaal Goldfields, or wherever else the Table Mountain sandstone is exposed.

The second region comprises the desert-like "Karoo" of the colonists, which may be said to extend from Graaff-Reinet on the east to the Atlantic coast, ranging diagonally northwards across the Orange River, through part of Griqualand West, to the Kalihari Desert and Great Namaqualand. Within this arid tract, which is subject to long periods of drought, few ferns flourish. Those which do so pertain, as might be expected, to genera, distinguished by small hard leaves and wiry stems, such as *Pellœa*, *Cheilanthes*, and *Nothochlœna*. No less than seven of the number, viz. :—

Cheilanthes	*induta*
Pellœa	*involuta*
,,	*deltoidea*
,,	*robusta*
,,	*lancœfolia*
,,	*Namaquensis*
Nothochlœna	*Rawsoni*

growing nowhere else, the last five being confined to Little Namaqualand only; whilst three other species

Pellœa	*andromedæfolia*
Asplenium	*Ceterach*
Actiniopteris	*radiata*

are not found elsewhere in South Africa, thus making a total of ten peculiar to this region.

The third region—commencing with the extensive forests of George, the Knysna, and Tzitsikamma, and including the wooded heights and valleys of the Zuurberg, the Amatolas, and the intermediate mountain ranges of the Eastern Province and British Kaffraria—comprehends by far the richest portion of the Cape Flora. It may be properly extended, indeed, beyond the north-eastern frontier of the Colony into Independent Kaffraria, and up to the foot of the Great Drakensberg chain, the Umzimvooboo or St. John's River forming the best botanical limit between it and Natal.

There is, in fact, so little difference between the vegetation of the two regions that, with the exception of *Asplenium Solidum* (which, as shown in the list, is really no more than a variety of the omnipresent *A. adiantum nigrum*) the third possesses no fern which is not found in the fourth region also. It has besides nine other species peculiar to South Africa which do not grow in the first or second regions, viz. :—

Gleichenia	*umbraculifera*
Cyathea	*Dregei*
Woodsia	*Burgeesiana*
Pteris	*Buchanani*
Asplenium	*Kraussii*
	prionitis
	splendens
Polypodium	*ensiforme*
	Schraderi

besides three of those which extend to the Mascarene Islands, viz. :—

Asplenium	*Sandersoni*
Aspidium	*catopteron*
Polypodium	*Africanum*

The fourth region is, as already observed, not easily separable from the third by any precise line of demarkation, but it includes, besides Natal proper, the whole sea-board—from the mouth of the St. John's upwards, Zululand—and the north eastern portion of the South African Republic; and its flora possesses, therefore, a distinctly subtropical character. It is especially favourable to ferns, Natal alone, according to McKen, containing no less than 120 species, to which several have since been added. Of these, seven, viz. :—

Davallia	*nitidula*
Asplenium	*Guenzianum*
,,	*Dregianum*
,,	*Thunbergii*
Nothochlæna	*inæqualis*
	Buchanani
Anemia	*Dregiana*

are peculiar to this region alone; whilst eight others, viz.:—

Pellæa	*pectiniformis*
	Burkeana
Asplenium	*brachypteron*
Aspidium	*Buchanani*
Oleandra	*articulata*
Polypodium	*unitum*
Gymnogramme	*argentea*
Acrostichum	*tenuifolium*

have passsed from it to the adjacent Mascarene groupe. The remaining species peculiar to South Africa—

Hypolepis	*Bergiana*
Cheilanthes	*capensis*
Pellæa	*leucomelas*
Aspidium	*pungens*
,,	*Bergiana*
,,	*inæquale*
Nothochæna	*Eckloniana*
Schizea	*tenella*
,,	*pectinata*

are distributed more or less evenly over the several regions, and not confined exclusively to one.

That others still remain to be discovered is more than probable; and although we must expect that the chief additions to the list will consist of species already known from neighbouring countries, the deep gorges of the Drakensberg Chain and of the Limbembo Range, its continuation towards Delagoa Bay, have as yet been so little explored, that there is certainly a fair chance of novelty. Even since the foregoing list went to press we have received through Dr. Shaw, from Wakkerstroom in the Transvaal, an *Adiantum*, which seems to form a connecting link between *A. candatum* and *A. lunulatum*; and from Mr. E. J. Dunn, also from the Transvaal, several species which we have not yet been able to identify.

In conclusion, it may be safely asserted, that although the ferns of this country constitute by no means a conspicuous portion of its widely diversified vegetation, they yet present beautiful and curious forms which will well repay the pains of the collector; as well as special characteristics connected with climatic influences, and geographical distribution, which will render them most interesting to the botanist.

A. M. B.

Native Education.

III.

THE peculiar relations of the governing power in this country to the people of native race, who are either fellow-subjects, with the colonists, of the British Crown, or, in some way, the objects of British protection and philanthropy, find no analogue in the history of other communities. Observation and experience are limited to our own horizon; the problem of fitting each section of the population into the vacant places of our social economy is one that this Colony must solve for itself. There is no stereotyped formula of how to do it. Evangelists and Missionaries may help; but Society demands that the thousands of its now useless members should be, first of all, taught and trained to do their duty to the State, to their homes, and to themselves, as a sure preparative discipline for securing the observance of their duty towards God. The immediate needs and the general welfare of our Society must give shape to our policy. Practical men must work it out, feeling their way, as they go. Some lessons of warning and of encouragement may perhaps be gleaned here and there, but the broad outlines of any system of dealing with the all-important and interesting questions of utilizing our aborignal population for the common good, must be sketched entirely from our own point of view.

Travellers say that the Maori is surely and rapidly dying out; and presage the early extinction of that highly gifted race; that those who were estimated in 1842 at 114,000 dwindled down to 55,000 in 1858, and scarcely reached 40,000 in 1870. The poet may idealize the Maori and paint the vision of Macaulay's New Zealander, in the midst of a vast solitude, taking his stand on a broken arch of London Bridge, to sketch the ruins of St. Paul's; but truth will require that the traveller from New Zealand shall bear the physiognomy of the superior race, at whose advance the Maori died out. If the historian has nothing to record but the fast dying embers of a great and promising race of Aborigines, it is a painful reflection to those who are interested in human progress that the toils of sanguine, faith-led, Evangelists and Philanthropists should be well nigh fruitless. Have the indefatigable labours of a Selwyn borne no fruit? We are told that there is some observance of the external ceremonies of Christian worship, the repetition of texts of Scripture, the singing of hymns, the abstinence from ordinary occupations on the Sunday: but the essence of Christianity has not entered into many hearts, as evidenced by the mongrel and debased worship of the Hau-haus and other renegades amongst them.

If this story of the decadence of the Maori is true, whether the special causes can be found or not; if the Aborigines of New Zealand in a few generations will have to be classed in the same category with the extinct Moa—among the things that have tenanted

the land and ceased to be—it gives some colour to objections against any plans of civilizing the Natives. It is not unusual to hear people say: Why spend money, zeal, and toil in instructing these savages who, under the working of a law (presumed to be deduced from actual observation) must die out as the white man advances; must dwindle away, without yielding any adequate return for the labour spent upon them.

Now there is reason to doubt the universality of the law, so confidently put forward; one special cause for the diminishing population of Maori race is certainly alleged; but, at all events, the facts within our own ken go to disprove the law, as regards the Fingoes in the divisions of Port Pedde, Alice, Fort Beaufort. The recent exodus of the thousands who migrated to the new locations beyond the Kei was a necessity, because of the redundant increase of the teeming thousands who tenanted the Fingo kraals. Whatever may be the case among the Amaxosa Kafirs and Tambookies, a marked and appreciable increase of population must be granted among the Fingoes. And these are remarkable points of contrast to the characteristics of the Maori race—the Fingoes acquire our language, our habits, our religion, and our vices, and yet (to descend to a phrase, often uttered thoughtlessly) are not improved off the face of the earth.

I am not concerned to show how the acquisition of the habit of drinking brandy instead of Kafir beer is, prospectively, a serious evil, that may materially affect the relative increment of population; but if there are safe indications that the natives generally are becoming more numerous in these peaceful times, under the fostering care of the Government, it is quite plain that we are bound to adopt, for our own security and convenience and for their benefit, a course of really efficient training which may find no favour with the believers in the "dying out" theory.

Let no one suppose that the object advocated here is the utopian one of raising a nationality out of native elements; the native and exotic elements of the population are to be assimilated by the special utilization and cultivation of the former. To teach, train, and improve the present anomalous part of the community so that the fusion and absorption into the ordinary channels of industry may be steadily consummated is the practical and necessary object of any true method of native education. Thus only a unification of social and political interests can be promoted.

The only available agencies for transforming the native savage into a citizen, capable of understanding his duties and of fulfilling them, are the School, the Workshop, and the Christian Church. I wish to cultivate together the brain and the hand; the teaching, intellectual and moral, of the Church and the School needs an industrial *substratum* in its disciples; true Christianity is incompatible with the aimlessness of savage life; the pith of the Christian life is in the will and the means to be doing; what can be the outcome

of all the teaching, religious and secular, if the recipients are left to the unrestrained licence and apathetic indolence of a mode of living that makes no account of the responsibility of man, and offers no sphere for self-improvement, much less for self-control which is the basis of morality ?

Industrial training in the work-shop must be relied upon as the means of placing the native on a higher platform by bringing within his reach the power of fulfilling the active useful duties which the community demands of him. If trade-schools and technic colleges are indispensably necessary in Germany and Switzerland to enable their artisans to hold their own in their struggle for life, against the overwhelming competition of other countries, it must be deemed reasonable in this country to begin at once to lay the foundation of an industrial system of education, however humble. The crucial question is, What will the thousands of boys and girls do with their power of reading, writing, and ciphering and of participating in Christian worship, if they don't know how to use a plane or a saw, a needle or an awl, much less to cut out a coat or a gown, or to make a shoe or a door, or to put a tire on a cart-wheel ? It may be no easy task to overcome the *vis inertiae* of the native character ; but against this we may balance the very earnest desire of many intelligent natives to acquire the knowledge of handicrafts, and the daily growing necessities of a more civilized course of living, which ministers irresistible spurs to industry. If the work-shop becomes the supplement of the day-school, and the trade-school completes the practical training of the work-shop, we may hope to compass many great ends simultaneously ; and especially we may hope to fill the lower departments of the labour-market with carpenters, joiners, smiths, workers in metals, printers, tailors, shoemakers, and harness-makers, and leave an ample residuum for farm-labour.

Those who wish to forecast the future educational policy of the Colony may look down the vista of a generation or two and see trade-schools, such as those of Stuttgard and Zurich, opened in every chief town, where our young men are to get practical instruction not only in the departments of building and domestic trades but in the higher appliances of architecture, engineering, machinery, and chemistry.

In the rapidly advancing progress of technical knowledge of the Industrial arts, it seems propable that secondary instruction of a directly practical character, bearing on the business of life, linking science with artistic manual skill, bridging over the gulf between theoretical knowledge and its application to the manufacturing arts, will be recognized by every enlightened Government as an indispensable supplement to the primary instruction, now given. The educated hand of the Continental workman is beginning to be recognized in England as a formidable rival. Workmen are not only better educated in the elementary schools of the Continent of Europe, but have great facilities for art-culture and for practical

training in every department of industry. England has a profusion of raw materials, mechanical power, and physical labour, but the Germans, the Swiss, and the French have found out that their superiority is to be obtained by applying the greater skill of their artisans to the treatment of the raw material; and this triumph of artistic skill over the brute force is sure, however slow British manufacturers are to see it and to press on the State the considera tion of the defective training of the British artisan. Switzerland is certainly not a wealthy State; but by its complete system of Technical Instruction the public works and manufacturing institutions of that country are kept supplied with young men thoroughly instructed in their respective Departments. And what success they have achieved! From us, says Mr. Scott Russell, they have taken away our Coventry ribbon manufacture; from Lyons, they have appropriated a large portion of the famous silk weaving; in watches and clocks they have long kept the rest of the world going; and their intelligent, educated, skilled men are prized all over Europe.

By beginning humbly with the industrial teaching of our native population, and then promoting trade-schools in our larger towns for those who aim to be master-builders, mechanics, and foremen, we may live to realize something of that self-reliance and of that productive energy, which alone can lead to the material prosperity of this country.

Δ.

A Trip Through Kafirland.

CONCLUDED.

On reaching a small branch of the great Tina River the travelling was bad indeed, and at last, as though nature had allowed the struggle to continue too long, our wagon, in attempting a drift, finally collapsed, and became immovable. All the lashing and yakking in the world would not move the oxen, and it was evident that there was nothing for it but to off-load, so, with the help of the Basutos, we carried everything to *terra firma*, some considerable way off, and after thus lightening the wagon it was able to be drawn out. As the day was waning, and the weather was getting rather bad, for a thick misty rain had set in, we determined to pitch our camp, and accordingly did so close to a lovely spot, where the river formed a junction with another stream, and, both combined, rushed headlong over a precipice of some eighty feet in height. The banks of this stream were essentially beautiful, with its deep gorges and dark-wooded banks lower down. Another waterfall occurred about half a mile further down. This one was even higher than the last, being over one hundred feet. The great peculiarity about these falls was that a person could go under them without being more wet

than what the misty spray obliged, for the water poured over two enormous ledges of rock, forming a spacious cavern underneath. These caverns were the receptacle for a variety of lovely ferns, all of which were of most luxuriant growth. It was with a curious sensation that we sat beneath the huge volume of water, watching its foaming stream boiling and dashing beyond us; and a sort of dread that the heavy overhanging rock would topple over, added to the singularity of the situation. We gathered some fine specimens of maiden hair and other ferns, and then wended our way back to camp. As we neared it we found that our Basutos had lodged themselves in some extensive crevices on the side of the rocky banks, and their bright fires now glimmered out with an effect as picturesque as it was beautifully wild. We had brought plenty of meat with us from the "Residency," so both ourselves and those who accompanied us were well off in that respect; and little groups of natives gathered themselves round each separate fire with their evening's allowance, which was soon hissing and spluttering in the embers. The rain had now assumed a decided character, and gave every prospect of a heavy downpour, so we made the best of our position, and settled down for another "rain camp." We gauged our suppply of the "cup that both cheers and inebriates," and found that it still held out prospects of being able to soothe the inner man for some considerable time to come; but we found it necessary, at a secret meeting held by the party (with the exception of two), to pass a resolution to the effect that a strict watch must be kept over the tent appertaining to ———, and that a committee be appointed to regulate the supply of the precious fluid to that establishment. These precautions were most happy in their results, and though there was at first a slight disposition to grumble, yet, on the whole, the gentle check worked for good, and it may, indeed, have been the means of altering the whole career of our comrades' after life!

We remained "rained up" for three days, during which time the programme of our first "rain camp" was adhered to with, perhaps, the exception of one of our party, who, to obtain exercise, started the novel idea of walking round his tent pole. We were assured that several miles a day were thus accomplished, and, judging from the well-beaten circle discovered on striking the tent, we could easily imagine that this statement was anything but exaggerated. Though doubtless health giving, it reminded us more of the Polar bear in the Zoological Gardens at home than anything else we can liken it to. We wonder if our Arctic friend would also hanker after "a nip medicinally" on the completion of a certain number of "healthful gyrations?"

On the morning of the third day the weather cleared up, and the fleeting mists disclosed faint glimmerings of azure. Gradually the sun forced its way through the heavy clouds, and ere "the sun was over the yard-arm" our camp was struck, and we were again under weigh. We were now journeying at a right angle to our former

line, and were making an almost easterly course between the "Tina" and "Tsitsa" rivers. A range of hills divided the two, and formed a watershed to each, the streams on our left being tributaries of the "Tina," and those on our right ran into the "Tsitsa." The country we were in belonged to the "Amapondomisi," at one time a powerful off-shoot of the "Pondos;" but now it is divided and broken up by party strifes, the smaller and most war-like section being headed by the great warrior, Umhlonhlo, whom they look up to with great reverence. We do not suppose that for individual daring and consummate knowledge of the native tactics of war there is his equal in all Kafirland. Many were the stories we heard of his feats in war, and his name alone inspires a feeling of dread in the hearts of all the natives in these parts. We were naturally anxious to meet this hero, and as our chief had made this journey on purpose to arrange matters of vital importance to the peaceful welfare of the frontier, with this man, we were likely to have a good opportunity of studying both his character and himself. Our progress was slow and tedious, and many stoppages occurred on the way owing to the heaviness of the ground. One hill in particular was especially trying, and it cost our poor oxen many a stripe and goad ere reaching the top. The descent on the other side was nearly as difficult, and considerably more dangerous, for although the wheels were reimed and skidded to the utmost the incline was so steep that it appeared a miracle that the whole wagon and its contents were not turned bodily over upon the near oxen yoked to the disselboom. However, we arrived at the foot in safety, and, crossing a small stream, commenced a gradual ascent to the plateau above. As we arrived at the crest of the hill in the distance we descried two or three mounted men, evidently posted as a species of vidette. They waited for a few minutes to make out more exactly who we were, and then with one accord dashed away at a headlong speed. Some half an hour elapsed before we saw anything more of them, when on our left we noticed a amall body of horsemen approaching rapidly. One man rode in front on a fine-looking black stallion, and as he neared our party he reined up suddenly, and dispatched a messenger to the Commissioner to say that the Chief of the "Amapondomisi" had arrived to welcome him. This was Umhlonhlo, then, the admired and dreaded of all the Frontier tribes! A few minutes more and we should be able to judge for ourselves if report spoke correctly as to his appearance and manners! The messenger returned with an assurance that the presence of their chief had been looked for, and that "Chalis" (as he is known on the frontier) was ready to receive him. The chief approached, and all eyes were directed to his every movement. He was evidently a splendid horseman; the ease and grace with which he managed his well-conditioned fiery little steed was a picture, and would have made the hearts of some of the members of the "Cirque Imperiale" turn green with jealousy. As he came within a few yards of our party he raised his

hand in token of respect, and, pulling up, he dismounted and advanced with extended hand to the Commissioner. After the preliminaries of salutation had passed he looked round at our party, and we had then an opportunity of narrowly scanning this "dreaded Umhlonhlo." He was tall and very wiry, with every limb supple and sinewy; but the principle thing that struck us was the restless and ever-varying expression of his eye. At one glance he seemed to take in our numbers and strength, and his chief aim appeared to see how we were armed. Long practice among his own type of mankind had made him suspicious, and dread of treachery almost second nature. After he had satisfied himself as to the peaceful aspect of all things he became loquacious, and even communicative, and entered into a long discussion with our chief. Our camp had by this time been pitched, and the fires were soon burning brightly through the drifting mist, which had again come on. Umhlonhlo seated himself under a tent, surrounded by his councillors and minor chiefs, and under the influence of the soothing pipe, together with a cup of coffee, he opened up all his grievances and requirements. He said that he was tired of fighting, and, indeed, so well he might, for the country through which we were travelling evinced evident signs of the struggle which had been going on between "Pondo" and "Amapondomisi" for years past. A ruined hut! or the half-burnt remains of a once fine kraal! were sad evidences of the cruel war which was gradually decimating the Pondomisi. Though the Amapondomesi are more sinned against than sinning, yet the irresistible feeling of plunder and revenge makes them at all times ready to attack when opportunity is forthcoming; and many a forced march at the dead of night into Pondoland has been effected with a goodly result; and the lowing of the Pondo cattle and bleating of Pondo lambs has often been blending with that of their own flocks and herds. Of course retaliation follows, and a like exodus of "Amapondomisi" stock takes place towards the habitations of their powerful enemy.

The Government had taken up a most wise position in dealing with these wild frontier tribes, and although it was their policy to annex in succession, as opportunity occurred, yet this did not appear whilst conferring with the different chiefs; and the result is that the native, seeing all the advantages to be derived from the protection of a powerful ally, are eager to follow the course that was at first mapped out. On the other hand, did the Kafir think for a moment that Government was aiming at any such policy nothing on earth would induce him to second the views; and, indeed, the only way in dealing with these wily and astute children of Ham is to point out all the advantages obtainable by protection, and then let the proposition first emanate from *them* and *not* from the Government. This course had been pursued with regard to Umhlonhlo, and that chief had intimated his wish to become subservient to British rule. There was no doubt that he himself saw the neces-

sity of obtaining assistance from one direction or another, and as he turned his eye from one tribe to another he saw none but enemies on all sides. His turbulent character was opposed to peace, but his tribe had so suffered from the depredations of their neighbours that, much as they revered him, many had found it necessary to trek away with what remained of their stock—the "Lares and Penates" of the Kafir. Gradually the warlike chief saw his numbers decreasing, and his people worn out by continual forays. His only hope now was to make peace, and to do this he must, to a certain degree, surrender his liberty. It must have been a hard mental struggle; but at last, stern necessity and his sense of duty to his adherents got the better of his love of wild freedom, the die was cast, and the Government Commissioner was now in their midst to settle the final arrangements! As we watched this strange man we could not help wondering if, at the last moment, his heart failed him, and whether he relented taking the final plunge, looking back after once putting his hand to the plough. Many were the anecdotes related of his deeds, and the terror with which he inspired his enemies. Unlike most Kafirs, he was a magnificent shot with the rifle, and this, combined with his singular daring, supplied in a great measure what was wanting in the number of his fighting men. One story will suffice to illustrate the all-powerful effect of his name alone amongst those with whom he contended. The Pondos had made a march into his country with a force of some three or four thousand men, and intended taking Umhlonhlo by surprise; but the wily chief was far too cunning for his antagonists, and receiving notice several hours previously from some of his numerous videttes, he withdrew from the position he was then holding, and retreated towards a wooded kloof, where he and his followers, to the number of about 400, remained *perdu*. The Pondos advanced in full expectation of crushing finally their courageous foe. It was late ere they arrived at the place formerly occupied by Umhlonhlo; but they pushed on to the foot of the ravine at the head of which the Amapondomisi lay concealed. The day had been showery, and so the Pondos chose some large rocky boulders on which to make their fires. As the evening advanced, and the dark shades of night drew its veil over everything, suddenly there was heard a loud explosion;—it was occasioned by one of the damp rocks splitting through the heat. Someone in the rear raised the cry of "Umhlonhlo!" "Umhlonhlo!!" and with one accord the vast mass of men commenced a retreat which soon ended in a hasty flight. The Amapondomisi chief, hearing the commotion from above, soon learned that his enemies were in full flight; and bursting from his ambush, he and his warriors were soon amongst the wretched stragglers. That night's work cost the Pondos in killed alone nearly 600, besides a vast amount of stock, partly of their own and partly what had been captured as they advanced.

That evening our guests left us; and as we were due at Shawbury next day, we were likely soon to meet them again, as the Commis-

sioner had decided to hold the "palaver" near the mission station. Early on the morrow, after executing a fine ox presented to us by the chief, we wended our way towards Shawbury, some twenty-five miles off. The scenery was certainly very grand. We were travelling along a high ridge between the two great tributaries of the St. John's; on our left, far down in the valley below, ran the broad and powerful "Tina;" and far along in one of its bends, we were informed that the mission station of "Osborne" lay. Away in the dim distance was pointed out to us the Insizwa Mountain, famed for its copper mines, and upon which already many covetous European eyes have been fixed, but to no effect as yet, for the darker brethren of those parts take a jealous interest in preventing any encroachment. Stretching more northward ran a line of hills dividing Adam Kok's country from Kafirland, and threading its way along the side of a hill, then diving into the depths of a valley, could be discerned the high road to Natal; judging from the little we could see, the travelling beyond the "Tina" must have been most laborious.

We reached Shawbury, a prettily situated mission station close to the "Tsitsa" River, and were welcomed by the missionary and his good wife. As we crossed the threshold of the neat dwelling, it was quite a novel sensation to once more tread upon something more than Nature's carpet; but when we sat down to the evening repast, with our legs tucked beneath the "hospitable mahogany," the cup of our enjoyment was filled to the brim. Our encampment was pitched some little way off in the midst of some flowering mimosa, and the sight it presented was most picturesque. The day following we devoted to visiting the "lions" of the place. Of these, the magnificent Tsitsa Falls, of course, took the pre-eminence. The river takes a wider bend just below Shawbury, and after running through some magnificent gorges, wooded to the water's edge, it flows through a flatter country, and broadens until it arrives at the edge of the huge precipice over which it rushes. It is here some 150 yards across, and this huge volume of seething water makes one gigantic leap into the abyss below. Such a grand and lovely sight it has never been our lot to witness before, and we sat spell-bound without uttering a word for many minutes. The falls have been accurately measured by Mr. Davies, the missionary at Shawbury, and reach the astonishing height of 375 feet. At the time we were there the heavy floods had greatly swollen the Tsitsa, and we saw the falls to the best advantage. It was one continuous broad sheet, and as it fell each foamy wave seemed to be endeavouring to overtake its predecessor ere it reached the depths below. We believe these falls are the highest in the southern portion of South Africa, although the Umgeni Falls in Natal approach it in height though not in breadth, they being about 360 feet. The day following was Sunday, and we thankfully accepted the day of rest after our week's hard travelling. Most of the party repaired to the mission school, where service was held in Kafir by Mr. Davies, and though unintelligible to the majority, yet

it was very impressive. Our oxen and mules revelled in the luxuriant sweet grass they cropped in the park-like pasturage below the station, and even in the short stay we made we noticed a marked difference in their appearance. On the morrow we prepared the camp for the meeting with Umhlonhlo, who was expected in the morning; he did not arrive, however, until about one o'clock, although for several hours previously men had been seen going to and fro upon the heights above. However, the chief was at last seen descending the side of a hill with a following of over 200 men. As they approached the camp they formed themselves into Indian file, and presented a curious sight as they passed one by one before our eyes. An advance guard of some ten or twelve horsemen preceded the main body; their chief came next, with his councillors and headmen; these were followed by his body-guard, named "Bologolelas" from their dare-devil pluck; their heads were ornamented with a huge busby of baboon skin, which gave them a most ferocious appearance. The majority of them were armed with guns, and Umhlonhlo himself was possessed of a very good double-barrelled gun by "Murcott," together with an old revolver which had been broken and was now clumsily mended with a ring of heavy iron round it; but, broken as it was, many a good day's work had it done, and many were the Pondos who had succumbed to it in the hand of the unerring Amapondomesi chief.

All our party, together with Mr. and Mrs. Davies, and several traders and settlers, were seated in front of the camp, and, after dismounting, the Kafirs advanced in a body to where we were awaiting them. Then followed one of the most extraordinary sights it has ever been our lot to witness. It was no less than the veritable "war-dance." One by one some dusky warrior would rush out from the crowd, and go through all sorts of contortions, shouting and gesticulating with might and main. First they would rush up frantically to within a few inches of us, and, leaping several feet in the air, would present to our view the well nigh naked limbs of a stalwart brave. The exhibition was unique and singular, but the presence of any but the sterner sex was almost out of place. After regaling us with this for some time, and all to the humdrum tones of the chief's "bongo," who chanted his praise in the Kafir tongue, they seated themselves in a semi-circle in front of the white men. Business commenced, and all the *pros* and *cons* of submission, boundary, and jurisdiction, &c., were fully discussed. Umhlonhlo strove hard to become recognized as the senior chief to his cousin Umditshwa, who had seceded from the rest of the tribe with a considerable portion of what Umhlonhlo considered were his adherents. But the question of precedence was not entertained by our chief; for, as he remarked, he had come there to-day to settle matters for the future, and not to discuss those of the past. The debates were too long to enter into them fully in this short space; but suffice it to say, that everything was, after many and wearisome

discussions, brought to a most satisfactory termination. Mr. Orpen was formally recognized as the magistrate to Umhlonhlo, and also those Amapondomesi across the Tsitsa; and all affairs relating to matters affecting the Government or their subjects, were to go through the resident. Of course trivial cases were to be settled by the chief himself, unless he liked to refer them to Mr. Orpen, or to take his advice upon such things as were beyond the native comprehension. Thus Umhlonhlo and his people were received under the protection of the Cape Government; and in order that they should feel that they were bound in some respect to uphold and sustain that Government, it was determined that, in course of a few months, or when the people had thoroughly settled down, a hut-tax should be levied. Thus the Amapondomesi would see that they themselves had a stake in the welfare of the country, and also that the protection accorded to them could not be obtained without some return on their part.

Our attention was now directed to the river, and how we were to effect a crossing; and as we had amongst our party a member of that most distinguished corps, "the Royal Engineers," together with those who were well acquainted with the shifts and expedients necessary to frontier travelling, we did not anticipate any great difficulty. Several suggestions were proposed, but at last the most feasible idea appeared to be to construct some sort of a raft. No sooner was this mooted, than it was generally considered to be the best—and, in fact, only—plan; and we set about procuring material and workmen. Both were at hand, and soon, with the ready assistance of Mr. Davies and Mr. Rütter, a trader at Shawbury, we were enabled to construct four long water-tight boxes, which were to be used as a species of pontoon. Our camp was struck, and we moved from where we were located to the banks of the Tsitsa River. We selected a spot where the river, though broadest, was less rapid, and camping there for the night, early next morning we were up betimes, with strong hopes of being able to effect our object. The boxes were lashed together, and formed a most respectable raft. The wheels of our wagon were then taken off and carefully stowed away and fastened. All was now ready for the first essay, with the exception of one thing, and that was the rope over the stream; for the river ran far too rapidly to use paddles or swimming the raft across by natives. We now began to perceive that our real great difficulty was what at first appeared to be a minor question. However, it must be attempted somehow; and, fastening all our available line reims, we started six or seven natives to swim it over. This they did all right; but in drawing in the "slack," the force of the water was so great that it broke almost directly. It was a sad disappointment to our hopes; but again and again did we try all with the same result. Mr. Orpen and J——— then made the attempt; but although they swam most magnificiently almost directly across against the rushing stream, yet even their essay proved as abortive as the

others. At last, after several weary hours' work we reluctantly were obliged to give up the attempt. It seemed hard that such brilliant conceptions should have succeeded so admirably, theoretically, but so signally failed, practically. There was nothing for it now but to return to our former encampment, and await the falling of the river.

Early next morning there occurred to our party an accident of so sad a character, that it spread a gloom over the remainder of our journey. As was usual with us, we repaired to our bath in the adjacent stream, two or three going to one spot and some to another. Several had already bathed and were making their toilet in camp, when we were startled and horror-struck by the announcement of Mr. Leifeldt, Mr. Orpen's clerk, that poor Thomson had been drowned near the main drift. At first we did not credit the news, and thought that it was a joke on the part of our friend, but the earnestness of his assurance left us no doubt about the sad event. We immediately repaired to the drift, bringing ropes and such implements as we thought might be required. It appeated that they had crossed the stream together, and on their return, Leifeldt, who was a powerful swimmer, arrived first at the bank. On looking round he perceived Thomson floating down stream, with his face of an unnatural colour. He immediately plunged in, and swam to where he last saw him, but when within four or five yards, our friend sank never to rise in this earth again. Although his companion dived several times he saw him no more, and sadly wended his way back to camp to disclose the sad tidings. We searched along the river's bank all that day, and set natives to watch at different intervals, hoping to recover the body, but until we left Shawbury no sign was seen of our poor friend. To our chief the blow was a terrible one, and his grief was indeed shared by all; for to know Thomson was to love him, such was the gentle kindness of his disposition. It is not often we meet a man of whom no ill word or cynical remark is made; but we feel sure that Hugh Thomson shared alike the love and respect of all who were fortunate enough to know him. A kind and loving husband, and a gentle and affectionate father, was the tribute we have ever since heard paid to the memory of our dear friend. On the morrow the drift was sufficiently low to allow us to effect a passage, and we managed to get across without further accident. Just before descending the Tsitsa Hill, which is a very steep decline, we were met by Mr. Key, the missionary (Church of England) at St. Augustine's. His mission is situated in Umditshwa's territory, and he exercises a most beneficial influence over that chief. We outspanned about twelve miles from Shawbury on the banks of a small tributary of the Tsitsa. Pushing forward early next morning we met the Amapondomesi some seven or eight miles from our camping ground. Umditshwa was an intelligent looking man of about seven and thirty years of age, but his health was greatly impaired, and it was evident that the ravages of disease were making great havoc of his constitution. It was not necessary to spend so

long a time with him as with his more turbulent cousin, and therefore matters were soon arranged as far as he was concerned. He made certain complaints about the residence of some Pondos upon which was supposed to appertain to the Apondomesi, according to the boundary line fixed by Sir Walter Currie. This complaint was carefully canvassed by Mr. Brownlee, and ultimately he gave a judgment in favour of Umditshwa, giving Mr. Orpen instructions to effect the removal of the encroaching Pondos, after they had gathered their crops. After the interview the chief presented the Commissioner with two very fine oxen, and in return he made several presents to Umditshwa and his councillors. We bade adieu to our savage friends, and hoping to make a good day's trek, but were again delayed by the announcement from two native horsemen that the sons of "Damas," the Pondo chief, were within an hour's ride, waiting to welcome Mr. Brownlee to Ponda country. In due course of time we descried the Pondo horsemen advancing in a body; at their head rode Rev. Mr. Warner and Damas's sons. Halting the wagons, we remained for a couple of hours in conversation with our new friends, and although the Commissioner had no actual business to transact with them, yet the relation from his own mouth of what had transpired during his previous meetings greatly pleased the Pondo representatives, and carried, of course, much more weight with it than a second-hand repetition. The Pondos were at first somewhat inclined to grumble at the decision given in favour of Umditshwa, but our chief silenced that with the assurance that it would answer their purpose much better to accept what was justly decided than to raise any question now that matters were so arranged. The young chiefs wished the Commissioner to accept some oxen, but as we were already more than sufficiently supplied, he thanked them, but declined. Damas's sons resemble their father singularly, being even now, as young men, exceedingly corpulent. The old chief is so enormous that he has to be driven about in a small ox-wagon. They were intelligent looking men, and dressed extremely well in European clothes.

There were several good-looking horses amongst those ridden by the Pondos, but we fancied that Umhlonhlo's Apondomesi were better off in that respect. Several of our party became possessors of the best we could see, though it was a difficult matter to make their owners part freely. However, we were much pleased with our purchases, and, like children with new toys, we were never tired with descanting upon their paces and other qualities. J—— secured two, the first was named after the Basuto name given to Mr. Orpen, "Ramalappi," signifying "the father of flags;" the second "Voltaire," from his god-parent, one of A——'s mules. W—— and P—— also obtained good ponies, and we presented a goodly front with all the additional horseflesh. The country we had been traversing was wonderfully diversified; a long range of hills to our right gave place to deep kloofs and valleys on our left,

and we were often delighted with exceedingly lovely landscapes of both highland and lowland character. From the blue mountains in the dim distance to the brilliant green of a well-cultivated vale, with its dark-tinted ravines heavily wooded, and its silver thread of water wending its way by rock and krantz, every kind of picturesque view was obtained within a few miles' range. Towards evening we began descending from the high plateau, over which we had been travelling since the meeting with Umditshwa, and after a gradual descent we arrived at one of the valleys we had seen from above. Our encampment soon sprang into existence, and after slaughtering an ox we gave way to the enjoyment of a good dinner, "a night cap," and the repose which follows a hard day's work. Several of the squatters in the neighbourhood repaired to our camp, and, judging from our first impressions, we do not wonder that Gangelizwe (for we were now in Tambookieland) was anxious to get rid of his troublesome tenants. However, we obtained from one of them a good span of oxen to relieve our own, who were nearly knocked up with their hard trekking in wet weather; and with the aid of our fresh span we pushed on early next morning for the Umtata. We reached this stream about noon, and, as we halted for some little time, we were again overtaken by our last night's acquaintance, who invited our chief and his party to be present and partake of the festivities at and consequent to the marriage of a daughter of one of these worthies with a *confrère* "of that ilk." The invitation was declined politely, and we afterwards heard that after the holy knot was tied a scene of riot and debauchery followed, which we were also told was only too common. The passage of the Umtata had now to be effected, and although the drift was a good one to look at, yet it was noted as being one of the most slippery bottoms (the Umhlonhlo drift on the Bashee being worse) in Kafirland. We all commenced operations by taking a delicious bath, and after thus invigorating the outer man we proceeded to work our way across. The mules were taken out of the light wagon and oxen substituted, and all was ready for the passage. Our comrade, J——, however, disdained to accept of a seat in so humble a conveyance, and with a proud, haughty look, conveying the ineffable disdain with which he looked upon our cowardly mode of procedure, he mounted the fiery "Voltaire," and, leading the more sedate "Ramalappi" by his bridle, dashed resolutely into the swift-running stream. With the innate perception of the scientific he saw at a glance that it would be best after reaching a certain distance to advance with caution, so with slackened speed and steady hand and eye he gradually steered his noble supporter and its companion towards the opposite bank. He had now reached the midstream, and with a look which must have lit up the countenance of the conqueror of Mexico, when he saw the last of the Incas in his power, he turned round and shot a gleam of defiance from his dark Spanish eye towards the drivelling craven crowd, huddled together in that miserable, humble conveyance. Never

have we individually felt so small! and never has the tide of defeat swept over us so mercilessly, as upon that memorable occasion. Bah! was their *no* spirit in us? was their *no* thought of in some way making amends for our idiotic fears? We were just upon the point of springing from our wretched vehicle and mounting our ponies to follow such a leader—when oh horror! What did we see! No! No! it cannot be, surely he is not down! With bated breath and eager eye we scanned the river's breadth, but where was our comrade? Where were his noble steeds? Ha! then some little way down the stream we see the object of our anxious search! Slowly and with difficulty we saw a Neptune-like figure rise from the depths. Even at this trying moment there was majesty in its every movement, and as it turned towards the gaping crowd, we could discern that even in misfortune our comrade had not lost one whit of that proud defiant bearing so characteristic of his nature. About a minute afterwards his two trusty animals, regained their feet. But there appeared to be something missing from the saddle of "Voltaire," and a sort of one-sided look proclaimed that the dexter pedal support had disappeared. It was indeed too true, for a stirrup had become disengaged whilst beneath the surface, and was now hurrying upon its lonely course towards the broad Southern Ocean. With the assistance of some wagoners, our friend and his chargers ultimately arrived at *terra firma*. The shock to his nervous system was great, but the amount of moisture, absorbed by his habiliments was still greater, and as one by one he divested himself of his saturated garments, it appeared as though a modern Adam had been re-produced in this Kafir Garden of Eden. Many a cheery laugh we had at our comrade's expense, in which he joined just as heartily. We stayed for some short time at Mr. Calverley's, who has a station at the Umtata drift, and appeared to be a very different man to those settlers by whom he was surrounded. Proceeding upon our journey we chose a pretty spot upon a small tributary stream of the Umtata for our camping ground. There were a few ducks to be seen upon its waters, and P—— managed to secure one to his gun. Even this was a change to the continual dietary of beef. This, of course, did not go far amongst so many. The melancholy intelligence was here conveyed to our party that the "Cango" cask did not contain more than two more bottlefuls, and this, owing to the iron brace-bit which had fallen in when boring an aperture, had become assimilated in colour to the best black ink. But nevertheless the announcement was received with blank despair, the inmates of one particular tent looking singularly "blue." But there was no help for it, so like a boat's crew at sea we placed ourselves upon an allowance, and thus eked out our miserable quantum until we arrived in more civilized parts. We were under weigh betimes next morning, and our oxen being refreshed with their rest from two days' labour, pulled with a will, and ere sundown we beheld the winding course of the Umbashee.

Whilst crossing we were overtaken by a party of Tembus, who entered into conversation with our natives, who were mostly Gaelekas, some of the conversation was carried on rather bitterly, and at last one of the Tambookies remarked that the Gaelekas did not get very far into their country, whereupon A——'s servant "Sangarui," replied, dryly, "Well! perhaps it is just as well, for if Kreli had only let us go on as far as we liked, I should very likely have been living here instead of talking to a Tambookie." We may as well add that this gentleman had enriched himself very considerably at the expense of the "Halas" in the late encounter, and he was now the possessor of a very comfortable competency in the shape of some twenty or thirty cattle and a couple of hundred sheep. An incident of the war was also related to us which is well worth repeating. After pursuing some of the enemy into the mountains, search was made for those who might be lurking in the caves and crevices. At last one poor wretch was discovered stowed away under a ledge of rock, he was too far to be assegaied, so his assailants called to him to come out, or they would burn him out. He said that if they would spare his life, he would tell them something. Inquiring what it was, he replied, "There is another man in the cave," whereupon a voice from the depths shouted out, "He lies! he lies!! There is no one else in the cave! He is there by himself!!" We need hardly add that both shared the common fate of Kafir prisoners. On reaching the Bashee we found it impractable for wagons, so, making the best of our situation, we encamped upon its banks and made snug for the night. Mr. Wright, British resident with Gangelizwe, met us some few miles from the river. He had the forethought to bring up a boat which had been lying idle at Clarkbury and launch it on the waters of the Bashee so that there need be no unnecessary delay. At an early hour upon the morrow we effected a capital transit, and all our baggage and cattle were safely lodged upon the opposite bank. A wagon was sent from Mr. Hargrave's to bring on our "traps" to the Umguali when they were again ferried over in a boat belonging to Mr. Hedding. Another wagon was procured and, after loading-up, we trekked again for the Idutywa. Night overtook us ere we had proceeded far on our journey, and so we outspanned about five miles from Clarkbury. Our rest was disturbed by continual rows between the new native servants who came with the lately hired wagon and J——'s Zulu; at last the yells became so violent that we were obliged, per force, to see the cause thereof for ourselves. When lo and behold! we beheld the faithful "Tom" hammering a Tambookie driver for calling him a "Chaka" which appeared to be a term applied by the frontier Kafirs to all Zulus. Peace being restored we retired once more, and were not again disturbed that night. We reached the Idutywa reserve about noon next day, and received a hearty welcome from our kind friend the resident, Mr. Cumming, and also from Mr. Garner and his good wife. It was delightful once more to stretch oneself upon a Christian bed, and to feel that, at all

events, you would be free from the cattle walking over the tent ropes, and thereby endangering the whole structure. The morrow saw us wending our way to A——'s habitation, and after spending a night there, and seeing for the last time our old acquaintance, Kreli, we bade farewell to our companion and his family. Should it ever be our lot again to undertake such another journey, we trust that it will be in the company of our late comrade; and we hope that he may, even in a lesser degree, ever hold in the same kindly remembrance the pleasant and enjoyable time we have spent in his society. We trust also that a Government, who cannot fail to be acquainted with his abilities for command and discretion, will recognize more substantially his important services. Then, once more, adieu! one with whom we trust that the name of friend is reciprocal. Our paths were now separate, for some of the party remained behind for a day or two longer, and our chief and another pushed on for Toleni, where the night was spent under the cheerful roof of another old friend, the Rev. R. Ross. His name is, and ever will be associated with the welfare and advancement of the Fingoes and their institutions, and we know well that the improvements in that district are furthered and oftentimes suggested by their most popular pastor. It is as though the old church militant were again revived, for we have seen him, not at the head of armies arrayed for battle, but at the head of a dusty army of road-makers; for during his leisure hours he is often seen directing the proper construction of roads, which are the admiration of those who have travelled over them. The Resident amongst the Fingoes may be, and is justly mindful of the assistance afforded him from Toleni. The Commissioner made a detour to visit Capt. Blyth, whose residence was some fifteen miles off. After partaking of his genial hospitality, we returned to Toleni, and resting for the night we started early on the morrow for the Kei. Its passage was effected without much difficulty, and passing through Komgha we remained that night at Mr. B——'s, a few miles from Hangman's Bush. It was quite like meeting old friends again, and that night we stayed up, telling of perils by land and water, and enjoying a hearty laugh at the quaint and witty remarks that fell from his lips. The morrow saw us once more at the town from which we started, alter an absence of about six weeks, refreshed and invigorated by our absence. And we trust also that during our journey we had learned new facts and fresh truths, for we feel sure that a thorough cessation from all that appertains to mental and physical discipline, is now and then most beneficial both to mind and body. It renews as it were the lease of routine life, and gives a zest to what, after long grinding at the mill, becomes wearying and irksome. And now farewell, ye lands in which we have spent so many happy hours! Farewell to those whose kindness will ever be written on the tablets of our memory! In far off lands many a weary hour will be cheered by reminiscences endeared by thoughts of those whose friendship time can never efface. Our sojourn has indeed been a pleasant one, and we now look back with

feelings akin to sadness at the thought that a vast ocean space divides us from friends we love and honour. And, lastly, farewell to him through whose goodness we have been enabled to learn many a bright lesson from the great book of Nature, and who has ever been foremost in furthering our efforts towards acquiring a knowledge of a people and their manners, in whom we take a more than ordinary interest. Once more Farewell dear old Cape!

P.

On board H.M. S. *Simoon*, February, 1875.

The Best Food for Man.

In the independent section of the *Westminster Review* for October, 1874, and in the February number of *Fraser's Magazine*, there are to be found two very striking articles as to what constitutes the best food for man. As the writer in *Fraser* is no less distinguished a person than Francis W. Newman, his paper is well worthy of attentive study; and although his arguments may fail to force conviction on unwilling ears, his facts are so skilfully marshalled and withal so eloquently worked up that they deserve to be widely read and thoroughly discussed. Briefly, his views are these,—That mankind are very much the worse for consuming meat and alcohol; and that neither of these are essential to the maintenance or prolongation of life. At first sight this may appear to be a very startling doctrine, and opposed to the world's experience for the last two thousand years; but the necessity of living on meat and drink is so open to correction that we would do well in these dear times to look the question in the face, and see what can be said in favour of the view that man is a frugivorous and not a carnivorous creature by virtue of his dental and anatomical structure. From the earliest times it is quite clear that the fruits of the earth were destined for our enjoyment. Our teeth are specially adapted to grind grain, and not to tear flesh like the lion or the dog. It is an exploded fallacy to talk of human teeth being *canine* in the sense of being made for rending when in reality, as Cuvier and Owen have conclusively shown, they are not unlike the teeth of apes. Their fangs are indeed larger than ours, and well adapted to crack strong nutshells; but none of them in a state of nature eat flesh, and certainly never cooked or after exposure to fire.

Another question often arises, says Newman, as to what is *natural* to man. "Is not *art* natural? Fire removes evil juices from potatoes. Vegetarians will not, because the process is artificial, renounce this use of fire. They steep beans and barley, they grind or crack grain, they boil, stew, or bake at pleasure. Mills and stew-pots were not born with the first human pair,—they are after inventions of human art. So is the roasting of flesh. Why may

we not call this natural, just as baking bread is natural, because each is naturally developed during the growth of the human intellect? Of cookery in the abstract we must admit this,—Cookery is requisite to make the greater portion of a flesh diet endurable to us, and without this a large part of the world could hardly have afforded food for man in his barbarism. But if we claim to appeal to evolution in defining what is man's nature—if we contend that that is our truest nature to which we tend in our nobler and advancing condition (a very just and wise view)—then we are carried to the conclusion that vegetarian food being the inevitable future of every thickly peopled nation, is the practice that must be avowed as alone suited to our highest and noblest development. Man in tropical regions began from it. Driven into ruder climes, and unable to live on crops fresh sown, or on fruits not yet ripe, he was forced by harsh circumstances to feed on the animals who abounded on the wild soil, or on the fish of seas and rivers, and became himself wilder and harder hearted. The command of fire enabled him to overspread these new regions, and during an intermediate era he found it *easiest* to live on hunting and on tame cattle. Besides that, it was long difficult to protect crops,—indeed, those who sow or plant must stay by their field till they gather the harvest. Inveterate custom fixes the diet of nations and is deaf to argument until stern necessity again comes in, as it assuredly must at last if human population is to multiply. Thus as evolution proceeds, it is discovered that flesh-eaters are struggling against a deep current of nature, and must suffer, if they are obstinate, in the contest."

The increased price of meat all over the world has become a fact distressing to gentry who cannot increase their income, while to the mechanics and labourers, who have acquired habits of flesh-eating in the last twenty-five years, it neutralizes the advantage of their higher wages—even if they abstain from drink. Everyone who can afford to pay for it is determined now-a-days to have a good dinner and a good glass of wine. The butchers tell us that the wives of the navvies insist on having the best joints, and by coming into their shops with ready money in their hands and doing their own marketing early in the morning, they certainly leave very inferior meat to their betters who come after them. In London alone the number of bakers has enormously diminished of late, while the publicans and butchers are doing a roaring trade wherever wages are high and work in plenty. More and more land is being taken out of cultivation to turn into grass and feed sheep and oxen; while in Europe they are turning in every convenient quarter for fat cattle and preserved meat. If things go on much longer in this direction we shall all be eaten out of house and home, and the area of cultivated soil will be quite unequal to the food supply of the millions who expect to be properly fed.

So far as mere taste and luxury are concerned, the love for good meat will never quite die out of civilized communities who are fond

of mere good living. Wine and beef are very pleasant to the palate indeed, and as such will always be at the service of mere gluttons or gourmands; but it remains now to be shown that they are by no means absolutely necessary to our well doing, and in fact are the chief factors in much of our modern diseases and so-called derangements of health.

Upon physiological grounds therefore we propose to glean a few facts from the writings of well-known authors in support of the view that if "the blood is the life," it is our duty to see that it is properly elaborated in our frames; and that sound principles of dietetics demand all our care both socially and politically, to prevent physical decay and waste of material.

According to Dr. Lankaster, animal food is composed of the same materials as vegetable food. It is formed of the same elements, and presents the same proximate principles. Liebig gives it as his opinion that vegetable fibrine and albumen hardly differ even in form from animal fibrine and albumen; while the researches of Dr. Lyon Playfair abundantly prove that gluten or vegetable albumen is identical in its nature with the albumen obtained from an egg; so that this body never varies in composition, being precisely the same in corn, in beans, and every other plant produce, as well as in the flesh and blood of animals. There is an absolute sameness in its composition, however protean the forms under which it appears. Thus if we place in a chemist's hand some gluten obtained from wheat flour, some dry albumen procured from the white of an egg, a fragment of the flesh of an ox, or of a man, or some of their dried blood, and ask him to tell us the difference between these various substances, he would answer that they are all exactly the same, and that he could detect no essential difference between any two of them as to the character of the albumen.

If this is the case, it is especially interesting to find from Boussingault that the various articles comprised in a vegetarian and frugivorous diet are more readily digestible by man, owing to his dental system and abdominal viscera assimilating to those of the ape, than a corresponding average from the flesh of animals. With respect to the proportion of nutritive matter discovered relatively in equal weights of animal and vegetable substance, it has been ascertained by Leibig and other great chemists that one pound of bread, oatmeal, rice, or sago, contains more nourishment than three pounds of flesh; and that a pound of potatoes contains as much as does a pound of beef, so that a shilling's worth of steaks will in Cape Town barely suffice for the support of a working man; while sixpence worth of bread or rice and potatoes will amply feed two adults in Ireland. In fact, Leibig asserts that flesh meat averages in nutritious matter about twenty-five per cent.; while rice, peas, wheat and beans, average from eighty-two to ninety-two per cent. The difference is so very great that we are puzzled to know why men prefer meat to vegetables and wine to water. It is, says

Dr. Trall, because the flesh of animals is exceedingly *stimulative*. Not so a vegetable diet. The former, like fermented liquor, excites the nervous energy of the physical system, quickens the circulation, produces rapid transformations of the tissues, and so doing increases for a time the muscular power. Hence, of course, when persons habituated to flesh-eating substitute for their ordinary diet a food less stimulating but more nutritive, a depression in tone and action generally ensues. This depression varies in duration and in intensity according to the temperament of the individual experimenting, and to the suddenness of the change made. But if the experimenter—undeceived by his seeming weakness—will have courage and sense enough to persevere in vegetarian habits, he will, before long be amply rewarded by finding himself improved alike in mind and in body; his sensuous enjoyments will be keener, his perception clearer, his brain stronger, his whole person lighter, purer, and more healthful.

The writer of this paper was so much struck by the arguments and facts set forth in a recent number of the *Westminster Review*, from which much of the foregoing has been extracted, that he determined to test the value of the hypothesis by actual experience in his own person. For forty years he had been a large consumer of meat, studiously eschewing all vegetables except rice and potatoes, and looking upon fruit as poison to a stomach made dyspeptic by hard study and much wear and tear of mind and body. Wine and beer in moderation at his meals, with coffee or tea for breakfast, were his ordinary drink; and yet in spite of all this he was much annoyed by flatulence, dyspepsia, bilious headaches, and frequent derangement of the bowels and stomach. After every meal he felt heavy and drowsy. Being a man of great energy and determined will, he steadily fought off this nervous depression by much walking, and constant round of employment for his hands, and partook freely of tonics, purgatives, &c. At length he determined to try the effect of gradually abstaining from meat. To begin with he had nothing for breakfast beyond weak coffee *au lait*, bread, fruit, or marmalade. The same for supper; while his chief midday meal consisted of bread and salt, soup, sago puddings, stewed or dry fruit, rice, and potatoes, with gravy of hashes, or the vegetables of ordinary Cape "breedies." In a word he partook of everything savory at the table except meat. At the same time he gave up wine, and restricted himself to one glass of good English porter, which in time he hopes to replace by water alone. In return for this partial abstemiousness he has rid himself entirely of dyspepsia and flatulence; and far from feeling depressed, never felt better or more cheerful in his life. His appetite is improving, he sleeps soundly, and he no longer requires the aid of drugs to compel the natural functions. In place of low spirits and indisposition to study he is now in the habit of reading far into the night, and enjoying good sound sleep after it; and what is more, he has recovered his youthful

elasticity of step, to which for many years he had been quite a stranger. The proof of the pudding has been in the eating, and he is very well satisfied with the results.

The arguments adduced by our author to prove the superiority of vegetable diet in the production of muscular strength are based, of course, on observation or experience. Referring to the statistics collected by means of a series of experiments instituted and conducted some years since by Dr. Forbes of Edinburgh, we find that a number of English, Scotch, and Irish labourers of the age of twenty-five being submitted to trial in relation to average height, weight, and strength, the superiority in all three qualifications was adjudged to the Irishmen, the Scotchmen occupying the next place, and the English coming last in the category. It was then ascertained that the latter had been accustomed to a mixed diet of flesh and bread, the Scotchmen principally to oatmeal porridge, and the Irishmen to an exclusively potato diet.

In this connection we have only to look to the Kafirs in our borders, and at the Diamond-fields. They live upon nothing but sour milk and mealies, or meal and water made up into a sort of thick paste; and yet they undergo toil most severe day after day upon this apparently meagre diet.

But it is idle to multiply instances of what is perfectly well known to every traveller of note into wild and uncivilized districts. The normal diet of savage nations is one of milk and meal, and their physical stature and health are generally high; so that if they take to meat it is because of the example set them by white traders, or during the excitement of war time. While men and women are thus in rude health and live simply without excess, the stomach digests with seeming indifference a vast variety of food. It is different when they are ill. Then diet, with them as with us, becomes a matter of first rate importance, and in many cases the cook is proved to be a much more useful ally than the physician or friend. We are not talking now of vegetarianism carried to an extreme and thereby made ridiculous; but we desire to show that meat and drink are mere luxuries, and *not necessities of our natures*, and that a very good meal three times a day can be secured for us all at a very moderate price, if we will sink our prejudices and fairly test the subject for ourselves in all honesty, by partaking freely of fruits and grain.

When we consider that the population of England is over thirty millions, and that the greater portion of their flesh food has to be imported, we see the extraordinary advantages that would arise were the English people to abandon the use of meat; for it is certain that under wiser diet and improved land tenure, we could as easily feed sixty millions from the soil itself on fruit and grain as we now feed thirty, with the help of enormous importations. Of all food, in most climates, fruit produces the maximum yield from a given area. In Ceylon it may be in cocoa nuts; in the plains of

India, from some other palm or bananas ; in France chestnuts are the most productive crop ; in America the apple or mealie ; in South Africa the pumpkin, the melon, the quince, the fig, the peach, the pear, the apricot, or the grape ; while in England it may be cob-nuts or it may be apples, and the union of the two is as admirable a food as bread and cheese, or as figs and walnuts. In fact there is such a variety of food green, ripe, or dried, to be obtained all the year round by cultivating the rich soil of our colonies, and the colonial capacity to support an enormous and dense population is so dependent on the price and quantity of the food proper to their nourishment, that as a political question mere abstinence from meat will be fraught with most important consequences to the future. More than ever is it manifest that in the long run the power of every European nation will rise or sink with the numbers of its population. Spain is on this ground left behind in the race. German statesmen are already alarmed at the drain from emigration. Russia increases her numbers steadily, and loses none to the new world. In a word, wherever food is cheap, ample, abundant, and easily produced on the spot, there will be abundance of labour and sturdy defenders of the soil. "It is beyond dispute," says Newman, "that by an injudicious choice of food a nation may starve upon a soil which is amply sufficient for it. Horses we keep, not to feed on but for service ; but oxen are no longer used for the plough or the cart, or very rarely,—they are raised for food, and to get the same amount of human food *through them* needs three or four times as much land as would be required if we fed directly on crops of grain or pulse, potatoes, or fruit suitable to climate. So little are the minds of even educated people exercised on these topics, that ridiculous objections are constantly made by them. 'How can you get *nitrogenous* food to make your muscles if you do not eat beef or mutton ?' asks one gentleman who has a smattering of chemistry. But how do the bull and the horse get their muscle without eating flesh ? Evidently they get it, not only out of grain but even out of grass, to which our organs are not equal ; but the element must be in the grass, unless you admit that they get nitrogen from the air by breathing it, and *if they can, so can we quite as well.* 'The oxen would eat us up if we did not eat them,' is also a common remark. But why then do not the horses, whom we do not eat, eat us up ? Our graziers do their utmost to multiply the oxen, yet the objector is not aware that their number is now artificially great. In fact the oxen may be justly said *now* to eat us up, for they lessen largely the number of men who can live from our soil, if it was cultivated fully for our benefit and not for theirs exclusively."

It is further contended in these articles from which we are quoting that we have the positive testimony of the first chemists as to the vast superiority of grain or pulse, and dried cabbage or dried cauliflower, and nuts and dried apples and potatoes, *to equal weight* of dried meat ; so that it is very easy to convince one's self

that a flesh diet is the more expensive,—indeed, when largely indulged in, is a scandalous extravagance. But inasmuch as we are guided to food,—not indeed by pure instinct, but by a habit which takes the place of instinct, and our taste generally demands what is habitual, most persons are incredulous as to unusual dishes, and insist that *soupe maigre* must always be "meagre" thing; and that withal, at least, meat gravies we could not have palatable dinners. Only the few have the strength of mind to resist the tyranny of customary tastes; yet it is certain that the zest of food mainly depends on a healthy stomach and a keen appetite; and that the vegetable world has countless delicious flavours, far outnumbering those of the few animals whose flesh we eat. There is no basis for the prejudice which here is often so obstinate. To begin with broth, the vegetarians assert that the broth from peas, beans, or lentils, is far superior to that from mutton. "The flavour given by celery, with onions or leeks, to vegetable soups competes with anything that flesh can give. Mushrooms of several kinds surpass in delicacy and flavour the best of chops and steaks, which indeed often owe much to mushroom ketchup or horseradish sauce, or tomatoes, or capers, not to mention pepper and salt, curry and spices. The very cheap savory herbs which the poorest person can command are numerous, such as mint, thyme, lemon thyme, sage, fennel, balm, sweet marjorum, and horseradish; from which, with ketchup or celery, compounds may be made giving flavour to every combination of leaves or roots, or to grain and pulse, without thinking of milk or eggs, or even cheese."

In fact the greatest difficulty in banishing meat from our kitchens is in the determined resistance we are sure to meet with from our servants. What does it matter to them that the master and mistress are desirous of living to a green old age, and keep their bodies and brains in constant activity, without the aid of physicians. To them it matters little whether sound physiology is opposed to their prejudices or not. They are fond of good living, and they will grumble if debarred from plenty of butcher's meat, roast and boiled. Their god is their belly, and they would think life not worth having if they had to pinch their stomachs and starve upon vegetables and green trash all the year round in their master's kitchen. It is an old saying that God sent victuals, but the devil sent cooks, and the best cooks are to be found in France and Switzerland, where meat is very sparingly used, because it is so scarce and so dear, and requires to be humoured and doctored into flavour. Yet the French people are by no means wanting in spirit and physical strength, spite of their so-called meagre diet and free use of fruit and vegetables. The Germans, too, and most native races seldom taste meat; and those whose blood is not made inflammatory by the use of meat seldom have an inordinate craving for alcoholic stimulants to quench their moderate thirst. Many of the best pathologists are now agreed that gout, rheumatism, dyspepsia, and allied disorders are the

outcome of excessive excretion of urates and lithates in the system; and their presence there is not the product of healthy discharge of functions, but a proof of deranged secretion of a so-called poisonous acid. Whence comes this excess of acid if not from long continued and over-indulgence in animal food and fermented drinks; to be corrected only by free diluents and the specific exhibition of alkaline and vegetable preparations, with abstinence from animal food during the attack. A wide field of inquiry is here opened up as to why Irishmen are so free from gout, and why native grain-feeding races are so remarkably exempt from inflammatory disorders. If it were not true that meat is an improper article of diet, we might be convinced of that fact by the simple circumstance that nothing is more tiresome and nauseating to the stomach than to eat of the same joint day after day. We long for change, and even salmon palls upon the palate if too continuously indulged in. Is it thus with bread and butter, or milk and fruit? Why the Syrians are as fond of their prepared dishes of wheat as is the Kafir of his mealies and milk. They are content to live throughout the year on *their* national diet; but are we? Do we not consider housekeeping very badly managed if we have not abundance and choice of dishes; and what would these dishes be, for health or for flavour, if it were not for the vegetable preparations introduced into them. If health and strength resided in the meat alone, and flavour only in the seasoning, then the "Dopper" Boers of the Karoo ought to be the biggest and strongest people in the world; instead of which as a class they are gaunt and haggard, and are as ravenous as wolves. The writer has seen two young farmers of this exclusively meat-feeding class eat half a sheep at a sitting between them; and this without bread or rice, or anything more nutritious than a pinch of salt and a small handful of dried peaches by way of condiment. And so too of the Yankees, who are enormous consumers of meat, taking it freely at every meal. Are they unusually strong and able-bodied? If so their looks sadly belie them. Why, their young females are notoriously pale and chlorotic; their cheeks are pallid, their lips blanched, and their forms willowy and skinny to the last degree. And this peculiarity extends to all classes—the thinkers as well as the workers, the people of mind as well as the slaves of toil, the men of millions as well as the hard fisted artisan—in a word, they are the very antithesis of the ruddy complexioned agricultural Englishmen from whom they are descended or annually recruited. Of course the peculiar visage of our American cousins has been ascribed to the climate, to the spread of popular and compulsory education, to the rapid wear and tear of mind and body in search of wealth and distinction; but we believe the true cause to be the excessive indulgence in animal food, thereby inflaming the nervous energies, stimulating the pulsations of the heart, creating unappeasable thirst, and rapidly "running the machine" off the roads by overgreasing the wheels of life. A smart nation no doubt, but not a race of

octogenarians. They are spry and quick in intellect, but they are leaner and even more slabsided than our Australian brethren, who also over indulge in animal food, and in many ways are becoming strikingly like the Yankees, who are not their congeners, but who are exposed to the same climatic and dietetic influences.

But it may be said, How can a stout, burly man, weighing over fifteen stone, and quick at his fences, be said to be damaged in his chances of longevity by over indulgence in meat and malt liquor. Yet upon nothing are physicians more agreed than this, that except our poorest, the nation habitually eats and drinks too much, and that this is a very prevalent source of disease. Now a flesh diet, by its smallness in bulk, directly tends to this evil. It does not fill the stomach, yet the stomach does not act well unless distended; and all condensed food is unwholesome, even dangerous. By reason of the condensed nature of flesh meat, everyone who depends on it is tempted to take in more than his stomach can deal with; hence the doctor orders *dinner pills* to fortify us for a larger dose of flesh food. If they succeed the patient retains health, but wastes on his vegetative functions the strength which otherwise would have been at his voluntary disposal. But if his system is not equal to the effort, the superfluous food loads him with unwholesome fat, clogs his vital organs, and wearies his muscles with his own weight, or drives him to suicide or an early grave should his strength desert him, and dyspepsia, wasting, and melancholia mark him for their own.

Such are some of the facts and arguments that induced Professor Francis William Newman to adopt vegetarianism as his rule of life, and he emphatically declares that in consequence of his so doing, his general health is better than it was while a younger man, nor has his enjoyment of food at all lessened. "In my seventieth year I need neither doctors nor medicine. By general testimony the colour of my skin and the fulness of my cheeks have much improved under this diet, which I would now on no account give up, though I adopted it with much more of fear than of hope."

This we sincerely believe to be a perfectly truthful statement of facts, here imperfectly abridged by ourselves; but our own limited experience entirely coincides with it. The writings of Mr. Newman are as fresh and vigorous as ever, while the strong grasp of his subject, and the intellectual vigour evident in every line of his contribution to *Fraser* are as significant of *mens sana in sano corpore* as any ancient philosopher could desire. The subject of vegetarianism as a practical rule of life is further and most ably treated in "Fruits and Farinacea," by John Smith of Malton, and published by F. Pitman of Paternoster Row; and if any one in the Cape Colony would like to try the experiment of how to live happily, cheaply, intellectually and morally; how to prolong his days, sweeten his nights, and keep his mind in harmony with a well nourished body, and a stomach free of disorders, he has only to buy this book,

prepare the dishes there arranged, and in all sincerity abstain from the further consumption of meat. In return he will conserve his powers, restrain his passions, and keep himself free from the many ills to which flesh is heir, and to which ills nothing contributes so largely and directly as flesh itself, with or without the addition of alcoholic drinks. *Verb. Sap.*

Q. E. D.

The recent Cruise of H.M.S. "Challenger" in the Pacific.

[THE following sketch—in parts picturesque, in parts rich with scientifiic results, and written mainly by Mr. Wylde, the accomplished artist, and secretary of the "Challenger" expedition—has been kindly forwarded to us from Hong Kong by Commander Maclear for publication in the *C. M. Magazine*.—ED.]

H.M.S. *Challenger* left Wellington, the present capital of New Zealand, on the 7th of July last, for a cruize amongst the islands of the Pacific, including the Kermadec Group, the Friendly Islands, the Fijis, and the New Hebrides. On the following day, the 8th, a sounding was obtained off Cape Turnagain in 1,100 fathoms. The trawl was lowered, and it brought up numerous specimens belonging to almost every class of the deep-sea Fauna: sponges, sea-urchins, starfishes, shrimps, and fishes, many of them hitherto unknown to the naturalist. The trawl, now frequently used on board the *Challenger* in preference to the dredge, is the ordinary fishing-trawl and consists of a net about 30 feet long, tapering towards the lower end, and attached to a beam 15 feet long, supplied with iron runners at each extremity. It has the advantage over the dredge of not getting so readily choked with mud, and being much broader it covers considerably more ground, when being dragged along the bottom of the sea. On the evening of the day mentioned the sea presented a magnificent spectacle, the sky being lighted up by numerous floating patches of Pyrosoma. One of these animals, fished up in the tow-net, measured 9·6 inches in length, and two inches in diameter at the broader end, from whence it gradually tapers off like a fir cone. After proceeding for two days within sight of the east coast of the North Island, a sounding was taken on the 10th July off the East Cape in 700 fathoms. This time the trawl came up with a quantity of very tenacious mud, and comparatively few animals. A three days' run before a strong westerly breeze brought the expedition to the Kermadec Group, composed of a few small scattered islands at present not inhabited, the largest of which is known under the name of Macauley Island and Raoul of Sunday Island. On the 14th, sounding and trawling took place in 520 and 630 fathoms, in a position about midway between the last mentioned islands. Amongst the treasures

recovered from the deep on this occasion were a very beautiful Euplectella (or Venus' basket), and a silicious sponce several feet in diameter. Another successful haul was made next day, the 15th, in 600 fathoms, about 45 miles North of Raoul Island. Favoured by fine weather and a good breeze from the North West, the vessel proceeded on her course towards the Friendly Islands. Contrary to the opinion hitherto accepted of the shallowness of the Pacific compared with the Atlantic Ocean, a sounding was obtained in 2,900 fathoms, a depth of about three miles. As usual in great depths, the sample of bottom brought up by the sounding-tube proved to be a fine red clay. The bottom temperature was 32·9° F. or 0·5° C., that is to say half a centigrade above the freezing point of fresh water, which shows the uninterrupted communication between that part of the Pacific Ocean and the Antarctic. The position of this sounding is in lat. 25° 5′ S. long. 172° 56′ West. On the morning of the 19th, Eooa Island came in sight, and at noon of the same day the *Challenger* anchored off Nukualofa, the capital of the Friendly or Tonga Islands, after skilfully feeling her way through the intricate maze of coral reefs which bar the approach to this enchanted island Tongatabu, King George and his court, his charming subjects, the rule of the missionaries, and the beauty of the scenery, have been so often described that little or nothing remains to be added. The island affords a fair illustration of these happy regions of never-ending summer. Looking from the deck one sees on the right hand the large missionary church, standing on one of the highest hills in the island and yet not more than about sixty feet above the level of the sea. Next, the police station, for King George keeps very good order; then the royal residence, and towards the left the court-house, all ranged along the beach. Behind, the huts of the natives are scattered along green avenues shaded by cocoa-nut trees. Everywhere the visitor is invited to step in, take his seat on the clean mats spread on the floor of the hut, and taste their favourite beverage the *Kava*, so that since the day of Cook no change seems to have taken place in the hospitable character of the inhabitants of these islands. Those who had an opportunity to make excursions into the interior will long remember the parklike avenues which do duty here for roads, lined by patches of bright blue and red—the convolvulus stretching its slender arms across the path as if to bar one's passage or creeping up the trunks of the trees falling down in graceful garlands from the waving branches of the feathery palm. Occasionally some native maiden would step out from the foliage, a flower stuck coquettishly in her dark hair, and look with a mixture of wonder and amusement at the horde of white foreigners, who, seated on ponies or in carriages, frantically rushed past her in search of the lions of the place. Amongst the latter is a fig-tree about thirty-five feet in diameter or 110 feet in circumference. It stands on a knoll overlooking the inlet of the sea which penetrates to near Mua, the ancient capital of the island. Its height and amount of foliage cor-

responding with the size of the trunk, make this tree one of the marvels of the Pacific. Near Mua is the tomb of Tui Tonga one of the ancient chiefs killed in battle. With a curious resemblance to the pyramids of Egypt, it is built in pyramidal form, two sides of the base measuring about 130 feet, and the other two twenty-five feet, and rising in three successive steps or terraces, each about three feet high, composed of long slabs of coral rock. This interesting monument is now almost completely covered with trees, so that there is some difficulty in getting a view of the whole.

The *Challenger* left Tongatabu on Wednesday the 22nd July. When outside the harbour of Nukualofa, a sounding was taken in 240 fathoms, and numerous speciments were dredged up from the bottom. Next day she passed Turtle Island, the first of the Fiji Group, and on the 29th, sounded and dredged off Matuku Island, a good specimen of an island surrounded by coral reefs. Amongst the animals dredged up was a living Nautilus. Though the graceful shell of the creature is a familiar object, naturalists have as yet had few opportunities of examining the living animal. It was watched with great curiosity as it swam about in a tub of the bridge amidships, propelling itself by ejecting water from a tube, like one of our new inventions in steamships. Next day, the Expedition entered Ngaloa Harbour, Kandavu, one of the most southern islands in the Fijis, and a port of call for the steamers running between San Francisco, New Zealand and Australia. After a few days' stay amidst the beautiful scenery of this harbour, the *Challenger* proceeded on the 28th to Levuka, Ovalua Island, the capital of the Fijis, whence it returned to Kandavu on the 3rd of August. When off her old anchorage in Ngaloa Harbour, the trawl was sent down in from 200 to 600 fathoms with indifferent success. On the 7th August, H.M.S. *Dido*, accompanied by H.M. schooner *Renard*, entered the bay, followed next day by the mail steamer *Mikado*, from Sydney, and on the 10th by the mail steamer *Syphrenes*, from New Zealand, together with some smaller crafts, so that this remote harbour presented a very lively appearance. Some of the officers made an expedition to Bau, the capital of King Thakembau of the Fiji Islands. The *Challenger* left Kandavu about noon on the 10th of August. On the 12th sounded and trawled in 1350 fathoms. On the 13th encountered some heavy rain squalls. On the 15th sounded in 1,450 fathoms. On the 17th of August land was seen on the starboard bow. It proved to be Tongariki Island, one of the New Hebrides. That night the ship was hove to the channel between Makura Island and the Two Hills Island, a strong breeze blowing from the east, and consequently raising a heavy sea.

Next day, the *Challenger* anchored off the West Coast of Api, and landed a number of natives who had been taken on board at Levuka, having completed their three years' term as labourers on the Fiji plantations. They acted as interpreters between the officers of the ship and their own countrymen, who are noted cannibals, and

as a rule, attack all ships' crews that attempt to land on their island. The naked natives, armed with bows and arrows, were seen to gather on the beach, one by one approaching cautiously the spot where the boats had landed, but on recognizing their comrades, decked out in all the glory of red shirts and red caps, a good understanding was soon established. The island of Api, situated near the centre of the group of numerous islands known under the name of New Hebrides, risen in steep slopes from the level of the sea, and is covered from the beach up to the summit of the hills with a dense tropical forest. Above the tall trunks of the trees growing in close proximity to each other spreads out a solid canopy of foliage which the sun's rays are unable to pierce ; under the shade of the leafy roof, the mountain streams silently find their way to the sea, whilst from its surface, bathed in tropical sunshine, rise dense masses of vegetation like huge towers covered with ivy. Whilst the natives were being induced to part with their weapons in exchange for "trade," the dredge was lowered off the edge of coral reef which here fringes the coast, but it brought up only a few specimens and a quantity of mud, chiefly composed of volcanic sand. On the evening of the same day, August the 18th, the *Challenger* made sail for Cape York in Torres Strait, and after a favourable voyage anchored in Port Albany, off Somerset, at the North Eastern extremity of Australia, on the afternoon of the 1st September. During this passage, as well as during the subsequent voyage from Cape York to Hong Kong *viâ* the Arrou and Kei Islands, Banda, Amboina, Ternate and Manila, dredging and sounding operations were continued as frequently as possible and with the most surprising results. By obtaining the temperature of the water at all depths from the surface to the bottom, new light has been thrown on the character of the remarkable chain of seas which extend between the above mentioned points: namely, the sea lying to the eastward of Torres Strait, bounded by New Guinea and the Solomon Islands in the north, New Caledonia and the Coral Reefs in the south, the New Hebrides in the east, and North-East Australia in the west; the Arafura Sea, the Sea of Banda, the Celebes Sea, the Sulu Sea and the China Sea. It results from these temperature observations that this chain of seas forms in fact a series of sunken basins of great depth, surrounded and cut off from each other and from the neighbouring waters by a shallow rim or border, as is the case with the Mediterranean and the Red Seas. The water down to a depth equal to that on the border is able to circulate freely and gradually cools as one descends, but the whole mass of water below the level of the border, having no means of communication with the open ocean, remains at the same temperature as that of the water flowing over the floor of the rim ; thus forming in the depths of the above mentioned basins an accumulation of warm water at a comparatively high temperature. In other words the icy cold water travelling North from the Antarctic Seas, which is found at the bottom of all the deep open channels, cannot

obtain admission over the surrounding rim, and flows past it on the deepest side. Thus the sea immediately to the East of Torres Strait, with a depth of 2,650 fathoms, has, below the level of 1,300 fathoms, a uniform temperature of 1·7° C. (35° F.); the Banda Sea to the West of Torres Strait, with a depth of 2,800 fathoms, has from a depth of 900 fathoms to the bottom a uniform temperature of 3° C. (37·5° F.); the Sea of Celebes with the greatest ascertained depth of 2,600 fathoms, shows the same temperature of 3·7° C. (38·6° F.) from the level of 700 fathoms to the bottom; and the Sulu Sea, with a depth of 2,550 fathoms, shows a stratum of warm water of a thickness of 2,150 fathoms or 12,900 feet at a temperature of 10° C. (or 50° F.) On the other hand the Molucca Passage is open to at least the depth of 1,200 fathoms, and the China Sea to 1,050 fathoms. The above data suffice to give an idea of the knowledge derived from the deep-sea sounding and temperature observations made on board H.M.S. *Challenger*, with regard to the conformation and internal economy of these seas, supplemented by obtaining samples of the bottom, as well as of the water at various depths, afterwards subjected to chemical analysis; whilst the dredge and trawl are continually adding to our knowledge new forms of animal life in the fauna of the ocean. The scientific Expedition on board H.M.S. *Challenger* will soon enter upon the third year of its cruise, which will be devoted to the exploration of the Pacific as far as the shores of America.

To a New-blown Flower.

FROM THE FRENCH OF ALFRED DE MUSSET.

What would'st with me, sweet floweret,
Thou dear memento, full of grace?
Half dead to look at, half coquet,
How did'st thou reach my dwelling place?

Encircled by this mystic band,
Thou hast achieved a weary way;
With what intent? what said the hand,
When it removed thee from the spray?

Art thou a withered plant—no more,
Now sinking into death's repose?
Or dost, expanding as before,
Within some secret thought enclose?

Thy flower, alas! its whiteness drew
From innocence condemned to mourn,
While timid hope's symbolic hue
Is on thy circling foliage borne.

Hast thou to me some message brought?
Thou hast a voice—confide in me;
Thy vesture green—conceals it aught?
What may thy perfume's meaning be?

If thus it be, speak soft and low,
Thou messenger of strange behest;
If otherwise, let silence show;
Sleep light and blooming on my breast.

Well do I recognize the hand;
Capricious 'tis, and full of grace,
Whose dainty knots and supple band
Thy petals' faded hues embrace.

Should they aught other, little flower,
Than Venus' hand for pattern seize;
To rival this would tax the power
Of Phidias or Praxiteles.

'Tis white and pretty, gentle, too,
Not cold they say, and something more;
On him to whom it shall accrue,
It will unhoped for blessings pour.

But she is wise, she is severe;
Some possible mishap there seems;
'Tis well, O flower, her wrath to fear;
Say nothing, leave me to my dreams.

J. G.

Life in the Uplands of Natal.

"I'LL send one of the lads down to meet you with a spare horse, and depend on a hearty welcome at Yarrow," said Mr. John Bent, as he shook hands with me on the shady stoep of the principal hotel in Pietermaritzburg, the pretty little capital of Port Natal.

Mr. Bent was well and favourably known as a colonist of much energy and perseverance, taking rank with the little band of earlier settlers, who, earnestly believing in a bright future opening out for the land of their adoption, had with heart and hand striven to develop its great and varied natural resources. As may be supposed, he possessed a great wealth of colonial experience, and I gladly accepted his hospitable invitation to spend a few weeks at his upland sheep and cattle station in Umvoti county, and thus obtain a peep at the every-day life of a Natal settler. I was curious, moreover, to contrast my former colonial experiences derived elsewhere, with those acquired in this comparatively new land, where the admixture of many races, diversities of language, great range of climate, and ever-changing conditions of soil and herbage, tend especially to create a sense of novelty, and excite the interest and wonder of the traveller, and new arrival.

Punctual to the day appointed came Tom Bent, leading the promised nag, and on the following morning, in the early dawn of a November day, we ride slowly down the long Syringa shaded street, enjoying the while a fresh, pure, morning air; sweet with the scent of dew-sprinkled flowers, wafted from the luxuriant and well kept gardens that flank the road on either side, and of which we catch bright glimpses at intervals, through the rose hedges which enclose and protect them.

It is our intention to halt and breakfast at a neat, comfortable inn to be found on the banks of the river Umgeni, some twelve miles on our road, and so slip over a portion of the way in the cool of the morning, as the sun's glare will be oppressive in the midday hours, and a long ride of some forty-five miles lies before us, over an open pasture country, for the most part unshaded by trees or bush.

At noon we have long left the beaten track, and are making our way by Kafir paths across the veldt, to the foot of the well wooded, but precipitous Karkloof range, over which our road lies. By the banks of a clear, sparkling rivulet, the limpid waters of which rise in the neighbouring forest, and are deliciously cool, we off-saddle our horses, and hitching the reim (a thong of prepared oxhide pendent from the headstall, and adopted by all colonists,) securely above the knee, turn them adrift to enjoy the luxury of a roll, and a short graze on the green, juicy herbage; then, producing our own sandwich boxes and pocket flasks, refresh ourselves for half an hour before attempting the ascent. A weary, troublesome job it proves, too, when grappled, for the path now leads up to and crosses one of the higher spurs of the range, and is narrow, stony, and slippery. Soon our

pace is reduced to a mere scramble, so dismounting, we drive on the horses before us, but the summit once reached, we find ourselves transferred as if by the wave of a fairy's wand, to a new land, another climate. We are now 5,000 feet or more above the level of Maritzburg, and on the open plains before us we seek in vain for the short, sweet grass of the lower provinces, sheltered by mimosa bush. The herbage here is plentiful, but wiry and sour, and the plain is bounded by densely wooded hills, off-shoots of the great forests of the Karkloof, abundantly well stocked with the indigenous yellow wood, stink wood, and sneeze wood trees; hoary veterans, some of them of vast size, and all of value for timber purposes. A cool breeze, moreover, agreeably tempers the heat of the afternoon sun, and our horses, cheered under its influence, prick up their ears and move gaily onwards, lightly bearing the thirty miles already accomplished. We have, in short, entered the region where the cereals and root crops common to most European climes grow freely, and where the apple, pear, and cherry thrive, and nestle beside the apricot, nectarine, and peach.

"There stands our landmark," says young Bent presently, pointing to a conically shaped heap of stones, conspicuously piled on the ridge of a hill. A few miles farther, and we reach the edge of the plain, and stand on the crest of a lofty range of grass-clothed hills, from which we command an extensive view of Umvoti County, as it falls gradually away to the Mooi River. And now in the distance, Bent points out, what at first sight appears to be but a few dark, zigzag lines, roughly traced out on the slopes below us, but which, as we descend and advance, rapidly develop into the stone cattle kraals, fences, and enclosures of the homestead; while driven, and tended by Kafir herdman, come many flocks of sheep and herds of cattle, filling the evening air with their bleatings and lowings, and all converging to the common centre; for as my guide explains, the morrow sees the commencement of the season's cheering operations.

Very conspicuous objects in the landscape, and planted in regular rows, as is the manner of the Dutch, the tall, gaunt stems of red, blue, and white gum-trees tower aloft, their dark-green leaves contrasting well with the bright young foliage of some fine weeping willows, and which, with the fruit trees of a well-stocked orchard, are the only timber to be found for miles around. The dwelling-house, originally but a small one, had been built by the former Dutch proprietor in the rough primitive style common to the time; but has, since it passed into his possession, been much enlarged and improved by Mr. Bent, who, moreover, faced it with a deep veranda —a great luxury, or rather indeed a necessity, in the Natal climate— and threw out French windows opening on to a small, prettily laid out flower garden gay with verbenas and magnificent roses, which flourish luxuriantly in this land if attended with simply common care. Evidences of the Boer taste are also abundant in the laying

out and arrangements of the farm and out-buildings, and the Englishman's improvements, grafted on to the old material, have often a curious and incongruous effect. The proprietor himself heartily greets us as we dismount; and leading the way to the common sitting room, now deserted, as the other members of the family are busy preparing for the morrow, calls to a Kafir girl to "bring tea and prepare a bath," which he declares to be the first essentials after a long and hot ride.

Shearing time in our wool-growing colonies is always the epoch of the year, but in Natal it means something more than the mere gathering in of the wool harvest. It was long held by the settlers that a native could not be trusted or taught to clip. This idea probably emanated with the Dutch, who always misdoubted a Kafir's capability of performing any but the most menial farm offices; and so arose the very general custom that led the principal settlers of a district to assemble and mutually assist each other to shear in rotation; the which, as the flocks were but small, and professional shearers unknown, answered sufficiently well.

Very pleasant social breaks to the monotony of up-country life these meetings grew to be. Old friends not met with for months and recent arrivals alike were sure to be found at So-and-So's clipping. Open handed hospitality is on these occasions freely extended to all comers; and though a straightforward shearer, who sticks to his work closely is always appreciated, yet still if a man proves but a cheerful, genial companion, his work may pass muster without too severe a scrutiny; and the shearing over, a pic-nic is often planned to the cool shades of the bush (as the forests hereabouts are termed), where a harvest of rare ferns rewards the lady collector, while the ruder sex may organize a bush buck hunt or some other amusement before they separate for their respective homes. Mr. Bent still adheres to the old custom, though he has amply proved that with proper and patient instruction his own native labourers soon become clever at all descriptions of skilled farm labour. Indeed he has in his employ some Zulu shearers whom he is open to back against all comers.

Presently a bell rings, and my host appears to conduct me to the supper table,—that pleasant, substantial, sociable meal to which you who have probably in colonial fashion risen at daylight, and so dined at noon, bring a hearty sharp-set appetite. All the members of the family are now assembled down to the youngest hope, still rather uncertain of gait. A goodly band truly, for Mr. Bent has several married sons and daughters settled in the neighbourhood, who have arrived with their families, so that with some friends from a distance we sit down to table twenty in number. The board is very amply spread; but still, as our host informs us with pardonable pride, all the concomitants of the feast have been gathered from his own estates. The huge baron of beef that commands the head of the table owes its thick, luscious layers of fat to the soft, rich mimosa-

sheltered pasture; the venison, game, and poultry come from near home, while the sugar and coffee have travelled for many a mile up from the coast lands, where they were grown on an estate in which Bent holds a share. Much of the furniture, too, has been turned from native timber; and we particularly admire the frame-work and doors formed of sneeze wood, which, when well worked up, much resembles satin wood in appearance, with this further advantage, that it perfectly resists the attacks of the white ant.

The meal over, our party disperse, and I join a group, who, comfortably seated in the veranda, are enjoying their cigars and discussing country side news the while. Presently the rich, full tones of a fine piano are wafted through an open window at the further end of the building, and it is with a certain thrill of surprise and pleasure that I hear a sweet young voice breaking forth in the words of a ballad which was a new and general favourite when I left England but a few weeks back; for rapid steam communications have now placed European novelties of all descriptions within easy reach; and I question much if the spry Natalians are not in possession of recent publications and modern fashions ere they have penetrated to very many retired nooks and corners in Great Britain, or wild districts in Ireland.

But a sense of the impending work on the morrow soon drives us to seek our couches, which in the case of we men, had been prepared in a large spare room in one of the out buildings, and which during shearing time is turned into a bachelors' hall for helpers from a distance. An hour before sunrise I am aroused by a Kafir boy, who silently hands me a cup of coffee; and early though it be, the whole family seems astir. As I step out into the sharp morning air I see two new arrivals busy off-saddling their horses; while Mr. Bent himself in stentorian tones is calling out the Kafirs from their hive-shaped grass huts, and bidding them be up and doing. A large open shed, built of rough stone, and some eighty feet in length, has been cleared out, and a space in front hurdled off for the reception of the sheep; but as some little time must elapse before the flock can be driven in, and the needful preparations completed, our host takes the opportunity to show me round the farm buildings. These are all built in like manner of rough, untrimmed stone slabs, such as are found plentifully sprinkled over the surface in most parts of the district, and considerable skill and ingenuity are displayed in fitting them firmly together without the aid of mortar. Flanking the sheep shed is the cattle kraal (enclosure), surrounded with massive walls, and provided with strong, well-driven wooden posts, the use of which will be presently apparent. A hundred head of cattle or more, consisting of bulls, trek oxen, cows, and yearlings, all herded together, are still lying comfortably on the soft bed of the kraal; but presently a string of Kafirs enter, each bearing an iron bucket, and arousing the cows they pass reims over their horns, and tying them up to the posts proceed to liberate the calves from an adjoining

pen; for in this stock-breeding land the cows are allowed to rear their young themselves, and but a small quantity is taken from them severally for domestic use. For a time all goes well, for the animals milked are staid and matronly; but presently comes the turn of a half wild young Africander cow to be tied up for the first time. Knotting three reims together, and passing the noose over the end of a whipstock, the Kafirs gently approach and deftly drop the loop over her horns. Up she springs and boldly charges the nearest man. The fellow nimbly slips aside, the thong tightens with a crack, and the animal finds herself gradually but surely, in spite of her struggles, drawn and bound securely to one of the posts. As she still kicks vigourously at any attempt to approach, a noose is placed over the hind foot, the leg boused straight out to another post, and while thus perfectly helpless a few drops of milk are taken from her, and so the first stage of her education is passed. From the kraal we pass on to the stables, where an imported thoroughbred horse is standing with some colts recently taken up for training. The rest of the stud have been driven off to the troop some miles away, for it is customary here to merely stable horses at night, and allow them to graze out on the veldt during the day. This early inspection of the stock is of paramount importance in the eyes of the settler,—it is then that the presence of disease is detected, and the general health and condition of the animals noted. The tinkle of a bell presently calls us in to an early breakfast, and that despatched, the party repairs to the shearing shed, where all is now in readiness for the serious commencement of business. Let us glance at the scene an hour before noon, when all things have fairly slid into their appointed grooves, and are working smoothly. The flock hurdled in the morning has sensibly diminished, and a fair number of sheep bereft of their coats sprinkle the adjoining paddock. A brawny Kafir guards the penned animals, and, obedient to the call of the shearer, catches and brings him a sheep as required. In a corner of the shed an oblong box stands on end, into which a wool bale is fixed for the reception of the fleeces, which a stout, heavy Kafir, armed with a sort of wooden spade, stamps and presses as tightly as possible. To the eye of an Australian, accustomed to like work conducted on a large scale, and attended with much care and precision, there is, perhaps, a certain roughness and want of finish in the arrangements, and carelessness in picking of the fleeces, shorn as they are in the grease, and tossed unsorted into the bale. The up-country Dutch farmers are specially careless as to the condition and packing of their bales. A wool purchaser at Pietermaritzburg once published in the public journals a list of what may be termed strange foreign bodies turned out of a pack. Some old iron, a few brick bats, a pair of very ancient boots, half an ox skull, with other articles too numerous to specify. But amongst Natal farmers the importance of giving increased attention and care to the general shearing operations, is now almost universally felt. The day is a

glorious one for the shearers, not a cloud to be seen, and the thermometer is steady at 80° in the shade; the heat has sent the yolk well up into the wool, and the fleeces come off easily; as we glance around we perceive that the Kafir shearers line one side of the shed, while the white men occupy the other: a motley, diversified band this last, composed as it is of the odds and ends of colonial life. That young gentleman in a blue Jersey frock, who has just released his sheep clipped in a workmanlike manner, would scarcely now be recognized by his former comrades as but lately the holder of a commission in that crack regiment, Her Majesty's ——th Lancers. By his side stands a man who, but lately a plougher of the ocean, now as ardently turns up the grassy veldts of Natal; and, should you inquire further, you may find more than one man present who though now but intent on stripping the sheep as expeditiously as possible, can nevertheless write B.A. after their names. The work is done more or less fairly, for there is no royal road to shearing; to acquire the art requires practice and experience. Just watch that veteran. With what ease he handles his sheep, and how comfortably and naturally withal the animal rests under the operation, yet always with a taut skin; and then with what seeming ease the cream coloured fleece billows over at every rapid stroke of the shears! What pleasant light work it appears in his hands! But note that novice, how drearily he toils along. Somehow there is always something awkward and amiss with his sheep; his wrist will be swollen and powerless by evening, and next morning, stiff and weary; he'll be free to confess that sheep shearing is no light matter. The Kafirs, stripped to the waist, give an air of novelty, if not picturesqueness to the scene, and though much addicted to excessive snuffing, and prone to chatter and gossip indefinitely over the distraction, if not closely watched, shear, on the whole, well; some remarkably so.

In a quiet corner, remote from such temptations, Mr. Bent has esconced a new Zulu pupil, and is himself instructing him. An old, nearly valueless, and very thin ewe has been selected for the first attempt, and with some difficulty the Kafir has been pressed into the right position, but the master's back once turned, he sinks down with a wo-ou-gh! of relief; refreshes himself with a long-drawn pinch of snuff, and allowing the sheep to rise, as if he considered her a fellow-sufferer, holds her, in violation of all shearing laws, by the fore leg, while he gently snips here and there at the fleece as most convenient, crooning some rural ditty softly to himself the while. Yet with due care and patience, the man will have mastered the rudiments of the art before the shearing is over. At one o'clock a bell rings, and any sheep in hand finished off, we repair to the bachelor's establishment, where a substantial luncheon awaits us, while the Kafirs assemble round a huge pot of mealie (Indian corn) porridge, which forms their cheap every-day food; but Bent has promised them, moreover, if they behave well, to slaughter an ox for their especial behoof before finally

dismissing them; and then, indeed, their carnivorous tendencies, now lying dormant, might well astonish a European. An hour before sunset the work of the day is over, and leaving the Kafirs to sweep out the shed, and hurdle in some more sheep for the morning work, we repair for a bath to the neighbouring rivulet, where a dam has been erected for the purpose, and then those residing hard by generally ride home without waiting for supper.

For three days the weather continues lovely. Mr. Bent glows with good humour, and the morning of the fourth dawns bright and cloudless as heretofore; even after lunch, when we resume shearing, the thermometer stands high and steady. After a time, however, we are almost insensibly aware that a change has been wrought in the atmosphere, we miss the sparkle of the cheery sunshine, albeit the shearers working hard at top speed, are still unconscious of a fall in the temperature. Mr. Bent looks without, and indulges in a low whistle. "Finish off the sheep in hands boys," says he, "and let the others go, the bush wind's on us, and we shall have rain before night." The change is indeed sudden and unexpected. A sharp, bitter wind has arisen, driving before it white fleecy wreaths of mist from the bush-lands, the sure precursors of rain, and already the air is full of moisture. No time is to be lost. Messengers are dispatched to collect and drive in the sheep already clipped, to be near the friendly shelter of the enclosures. Thicker and thicker gathers the mist, till raindrops begin to fall rapidly, and towards evening the horses and cattle, running before the storm, stream homewards of their own accord, to seek shelter from the chill blasts. At the station, all is hurry and preparation, for our guests and helpers, knowing full well the urgent need of their services at their respective homes, are busy saddling-up their horses, determined to brave the weather demons—for it behoves the stock farmer at such times to exercise vigilant care and attention—as a chilly Zulu shepherd is an utterly impracticable animal, who at once succumbs to the cold, and generally seeks the shelter of his hut, leaving the sheep to care for themselves, when they drive helplessly before the storm, and presently perish from exhaustion and chill. For three days the weather continues dreary, wet, and windy, but gradually, the rain-clouds disperse, and the sun, bursting his way through the mists, shines again with redoubled ardour; by degrees our party re-assembles, and shearing is resumed with vigour.

But we note a few absentees, and soon the news spreads that some heavy losses have been experienced elsewhere, and we are specially sorry to learn that two of our late fellow guests are among the sufferers. They had but recently entered into partnership, and as is often the case, from the great difficulty in procuring labour (the main stumbling block in the young beginner's path) had been unable to provide the sheds or shelter, which the sudden changes of temperature to which the climate of Natal is liable, would appear to necessitate

A few days more, and the imported sturgeon merinos, which form the rear guard of the flock, are triumphantly disposed of, and the season's shearing is over. The wool bales are stowed in an out-house till it be convenient to pack a wagon for the capital; but the troubles and anxieties of the farmer are by no means over. The journey to town is a long and difficult one. For some spots, the road is little better than a swamp, where the wagon may stick fast till it be from necessity off-loaded. Several unbridged streams have also to be forded at considerable peril should the water run high, while heavy thunderstorms in the afternoons are frequent, so many settlers accompany their drays on horseback, or rather meet them here and there to aid at difficult points of the road, and even the city reached, a great difficulty may be found in meeting with a purchaser at a remunerative price, and frequently household supplies are accepted as part payment. Shearing time fairly past, the upland farmer turns his attention to the garnering of his crops, for wheat and oats are both cultivated.

The traveller in Natal is generally much surprised at the very small proportion of an estate that is brought under the plough. The farm may embrace some eight thousand acres of land, composed of excellent soil for arable purposes, yet perhaps some fifty represent the area cropped. A little oasis in the wilderness. There have not been wanting passing visitors from other lands, who noting this anomaly, have publicly exhorted the Natalians to be up and doing, and satisfactorily swept away all obstacles, and bridged over all difficulties—on paper. Indeed, it must be confessed, that most of the schemes suggested, savoured strongly of, and were about as feasible as, the Irishman's simple process for making cannon. "Jist bore a big hole, and pour some iron round it."

The truth is, that the Natalian winter is also the dry season. Little or no rain can be expected from May till August; consequently it is in the summer, and wet season, that harvesting must be carried on, and under what difficulties can be well imagined. Violent thunderstorms and heavy rains of frequent occurrence, stop the work for the time being, and the fierce glow of the returning sun forces and ripens the grain so rapidly that if not speedily reaped much is shed on the ground. Mr. Bent has only some forty acres under wheat, yet the difficulties to be overcome will be great, ere the product is fairly reaped, thrashed, and garnered; even though provided as he is with a reaping machine, thrashing machine, ample sheds, and a fair force of Kafirs—expenses that are probably beyond the reach of a beginner—there are other annoyances incidental to the summer season which a farmer must submit to, or avoid, as best he may. Rust increases in virulence as the season wears on, and hailstorms are not unfrequent.

The earlier settlers in Natal are, as a rule, well supplied with native labour, for formerly grants of lands on which Kafirs had squatted were easily enough obtained, and these Zulus work out their rent in

a light and easy fashion by supplying the proprietor with a certain amount of manual labour during the year, at wages averaging about ten shillings a month per man.

Mr. Bent draws his labour from a farm distant some thirty miles from Yarrow, and situated in one of the deep valleys through which runs the clear and rapid Mooi River; the country thereabouts is so rugged, broken, and densely wooded with thorny bush, and prickly aloes, that cultivation is impossible; and the European visitor might pass on with a shrug; but to the Kafir it is a very paradise. He somehow manages to hoe up enough rich ground along the river banks to grow mealies for his consumption; the excellent heat in summer suits him and his herds of cattle, and flocks of goats (his chief source of wealth) flourish, so there he passes his time in luxurious idleness, attended on, and caressed by his wives, till an unwelcome messenger intimates that his turn of service has come; then, indeed, the farmer may be prepared for plausible excuses, and shiftings without number, and sometimes much vexatious delay occurs; but when once fairly set to work the Zulu is not a bad fellow, and can turn his hand to almost any household and farm work, though he seldom adheres to any one particular branch of industry. One native in Mr. Bent's household (surely gifted with unusually strong domestic proclivities) occupies the peculiar position of laundry, and nursery maid, if I may say so, and I have the authority of a lady for stating that he proves very efficient.

I well remember the amusing effect produced on my mind at seeing this huge brawny fellow gravely and sedately ironing out some light trimming, while a little boy (his usual charge) played at his feet.

The native women are but seldom allowed out to service, as their lords and masters require their attentions.

And so the summer wears on, and the time comes when we must bid adieu to Yarrow, and thank the inmates for their kind hospitality, a hospitality which we are bound gratefully to acknowledge, is extended by the Natalians without stint to the wayfarer and traveller throughout the land.

Currency and Banking.

NO. I.

These two subjects, while each is very distinct in its nature and in the purposes it is intended to fulfil, are, nevertheless, so often and so intimately associated with each other that it is difficult to disjoin the consideration of them. It is therefore proposed that they may fitly form the subject-matter of one or two papers having more or less of present and special interest to the Colony generally, and to its mercantile class particularly.

Of late there have been indications of the necessity for bringing some measures of reform into our humble currency system, if "system" it may have the honour to be styled. A Cape Town paper, recently noting this, correctly said that any change in a matter so important and delicate, would be regarded with apprehension, if not with suspicion ; but that the right key-note being struck, namely, that currency *is* a science (or rather an important branch of one), and that not very difficult to be mastered, much less nonsense would be talked about it than is usually done by such as hold the vulgar and too prevalent opinion or prejudice to the contrary.

As to the vital importance to a country or colony of having its currency based upon sound principles, and regulated by correct legislation, there cannot be two opinions. On perhaps no other question does the social well-being of a people hinge in so important a degree as upon the basis and conditions of its monetary system. It has been the misfortune of most countries, this Colony not excepted, to have suffered at particular periods of their history, through the wilful or accidental enactment of radically false or defective currency laws ; and nothing can be more true than that the legislative application of false or ill-considered currency principles to a nation's fiscal or commercial economy must one day recoil with more or less of disaster and ruin to communities as well as individuals. But the lesser, yet still *great*, negative evil ought to be equally guarded against, namely, that the commercial and general prosperity of a country shall not be unduly retarded or cramped by any monetary regulations calculated to have such effect, for, according to the presence or absence of wisdom in such regulations will be the resistance or non-resistance of material advancement.

Currency questions, say many, are too complex to be ever set at absolute rest, and too delicate to be touched, unless when actual occasion arises. They are reputed pet hobbies of theorists, who have always differed, and will differ, as long as they exist as a department of economical science. Therefore it is our duty to be satisfied with what may be found to suit reasonably well, and not run the risk of unsettling people's minds on subjects in which ninety-nine out of every hundred take not the smallest practical interest. The subject

is, no doubt, in some of its aspects abstract, and many opposing doctrines and theories have been raised concerning it; but the same might be urged against the consideration of almost every branch of human research. It is only because money is absurdly assumed to be placed on foundations secure as anything human can be, that people, eager in the pursuit of it as a possession, eschew it as a subject of inquiry, and are content with the crudest theories respecting it until an evil day comes.

Where *metallic* money is the only circulating medium, of course the subject is a very simple one; and it is only the legal existence and use of *paper* money which give rise to real currency questions. But these are eminently practical, and it is for practical men to take them up and discuss them. A writer has remarked, "Upon the *fixedness* of the value of the currency depends whether every part of internal and foreign commerce shall be lucrative or otherwise," and "A merchant or banker, who does not understand the principles of currency, is a mere automaton; he might as well be made of cast iron, and sign his name by steam."*

At first sight it may seem superfluous to take up all the questions of currency in South Africa. Here we have no mint; our metallic money is honest British coin; our paper money has regulated itself tolerably well for a good many years past, and may be presumed to continue to do so for some years to come. But no one who has paid any attention to the subject, or interests himself in the growth and prosperity of the Colony, can fail to perceive that the few laws to be found in our Statue books affecting questions as to money or monetary institutions are in many points defective, some being based on wrong principles, others on no principle at all; and altogether, not only that the legislative provisions are inadequate to the altered state of the Colony, whatever good they may have hitherto accomplished, but that the practical working of our paper currency by the banks, in whose hands it is, is defective, and demands reform at their hands also. In truth, a theory, or rather system of currency, exact as possible, well established, well elucidated, and practically adapted to the circumstances of this Colony is a desideratum of the first class.

Before going into special branches of the subject let us illustrate the necessity there does exist for legislative reform in our paper money system. It is only necessary to say that, strictly speaking, there is not a single enactment which regulates or was ever intended to regulate it. We have a "Bank Statements Act," which requires the publication of the affairs of each bank, or rather branch of a bank, as they may stand, on *two* given days in each year, 30th June and 31st December. We have a "Bank Notes Duty Act," the intention of which is simply to impose a certain payment to Government on the amount of bank notes in circulation. But neither of these pretends to the *regulation* of note issues. If any provision existed

* "Elementary Propositions in Currency," by H. Drummond, London 1826.

requiring a *minimum* ratio to exist between notes in circulation and coin held, and for the *publication* of the average *actual* ratio held during the year, as in most other countries is to be found, there would be something of the nature of regulation. But here paper issues are virtually free to all and sundry, without legislative authority, let or hindrance, excepting that a certain percentage must find its way into the Treasury.

But we are reminded of a certain proclamation by His Excellency Lord Charles Henry Somerset, on the 22nd day of August, 1822, which prohibited the issue of "Promissory Notes under Fifty Rix-dollars." This, forsooth, is regarded as *the* Bank Restriction Act of the Cape Colony! It is hardly creditable to the legislation of the past fifty years that there should still stand, or rather *be supposed* to stand, as affecting existing interests, a restriction so obsolete. To name the *minimum* amount for which a bank or other paper note may be issued is a very wise and proper thing for a Government to do; but it is strange, to say the least, that such a superannuated effusion of authority, found mixed up with decrees respecting the destruction of elephants, tigers, and other then existing denizens of the occupied parts of the Colony, should not have been repealed long ago, and an intelligible statute passed in substitution, the principle involved being deemed correct. No one who will take the trouble to read the proclamation can pretend that it ever had the remotest purpose of regulating a bank's note issue. The word "bank" does not occur in the document. Indeed, if we mistake not, not a single bank now issuing notes in the Colony then existed. The Cape of Good Hope Bank, the oldest in the Colony, was not established till 1836. Besides, the Government then had the paper *money* currency exclusively in its own hands, and by the following clause in the proclamation it will be seen that *its own neglect* was presumably the cause of the passing of the prohibition :—

"And, whereas, it has been made known to me that the issue of the notes, bills, drafts, or undertakings, aforesaid, has been attempted to be excused by a supposed want of small currency in the distant districts, I have, therefore, taken measures for the supply of the frontier with an adequate proportion of small currency; and I have empowered the landdrost of the Albany district to exchange any notes of the Colonial Treasury of ten rixdollars, or upwards, into small currency, in order that no plea whatever may exist for a continuance of the prejudicial practices, which it is the object of this regulation to check and annihilate."

It will be obvious that the only possible purpose of the proclamation was to prevent the manufacture of what might come into use *as money*, and so interfere with the rights of Government in its *exclusive* privilege of issue. So far the "order" was no doubt a wise one. But it is utterly absurd to suppose, as many do, that it was intended to establish a principle that a bank or other paper note should not be drawn under fifty dols. The above-quoted clause of the

proclamation itself proves this, it being the practice of Government to issue notes for so small an amount as two skillings, say *fourpence halfpenny*.

But apart altogether from the *purpose* of the proclamation, although by common consent it is taken to have the effect of a statute in force, it would appear on several grounds that, not only ought it to have no power, but it really has none ; and so far as the banks are concerned, they might treat it as a dead letter. The currency of the Colony has long ceased to know *rixdollars* as a constituent part of it ; and there is no provision in the proclamation as to the conversion into sterling of a rixdollar. Further, the writer is open to correction, but, with all deference to the practice of the banks in time past, he is of opinion that while they, in supposed obedience to this precious decree, have been issuing notes for £5 and £4 as the case may be, they have really been infringing it in letter and spirit, if it has any meaning at all. What does it say ? Notes, bills, good-for's, &c., must not be issued under fifty dols. What was a rixdollar in 1822 ? Was it not a *paper* currency unit, and (if I may trust " Wilmot and Chase's Annals," page 299) issued *originally* as the equivalent of four shillings ? A newspaper or other reliable source is not at hand by which to fix the exact sterling exchangeable value of the Cape dollar on the day of the date of Lord Somerset's proclamation ; but whatever may have been then its *depreciated* equivalent, were it 3s. 6d., 2s., or 1s. 9d., there can hardly be a doubt that the original *nominal* value of the paper rixdollar was that fixed as having reference to prohibited promissory notes, if the proclamation was intended to have any effect at all. It was not till 1825, three years after, that, by an order of the Privy Council, also promulgated by Lord Somerset, that *British currency* was established as the circulating medium of the Colony ; and it was then declared and enacted that British silver money should be a " legal tender in this Colony *in discharge of all debts* due to individuals and the public, at the rate of one shilling and sixpence for each paper rixdollar, and so in proportion for any greater or less sum."

This substitution of silver for paper money, therefore, had clearly to do with the *discharge* of debts only, and not with the *contracting* of debts, which the issue of promissory notes is : and accordingly, if the Somerset mandate is believed to retain any legal effect, no bank or individual is at liberty to make or negotiate a promissory note under £10, the equivalent of fifty rixdollars at the original nominal value thereof.

Unless a subsequent ordinance was passed, which the writer has been unable to discover, defining the equivalent of the dollar mentioned in the Somerset proclamation, and such like, as one shilling and sixpence, the above line of argument cannot be gainsaid.

After what has been said above, and considering that much more might be said to the same effect, there cannot be much difference of opinion as to the urgent necessity for some measure of legislative

reform in respect to our currency system. Some may say that such would amount to undue interference with free trade in banking. It would be no such thing. On the contrary, if well and carefully considered, and based upon just principles, it would act beneficially to bankers themselves as well as to the public at large. Banking does not necessarily imply a right to issue notes; and issuing paper money is not trading, but a privilege, which if not granted by the State (and it need not necessarily be so) should at least be exercised under its cognizance, and with well defined stipulations attaching to the enjoyment of it by trading companies. The absence of wise and wholesome checks, in so important a matter, is just as much to be condemned as the imposition by the State of impolitic restrictions, or an undue taxation of the profit arising from the privilege. It is therefore to be hoped that when Government decides to take the matter in hand, as it must do sooner or later, it will do so advisedly. There is a danger of measures of this sort coming before Parliament in a crude form, without being first well discussed outside, or it may be, which is worse, in the interest of party. Would it not therefore be wise, on a question affecting the large and important interests bound up with it, apart from its essential bearing on the well-being of the whole Colony, that before proposing legislation in a definite form, Government should appoint a Commission to take evidence and receive opinions from leading merchants and bankers of the Colony interested, and well informed on the subject? Failing this, the recommendations of the various Chambers of Commerce asked for and obtained, could not but be invaluable in assisting Government to deal with an admittedly difficult and delicate question.

There are those, it is understood, who advocate and who believe they will see the establishment of a Government paper currency in South Africa. But the Colony is not ripe by many years for such a measure: and even if it were advanced much beyond its present stage of prosperity, there are many and grave reasons why it should not embark on any such dangerous venture. It has its own experience to look back upon in this respect, and more modern instances can be pointed to of failure where success was too surely calculated upon. It must never be forgotten that the circumstances of a country dictate the principles of its paper currency to be established. That here it would be a mistake now, and for a long time to come, would not be difficult of proof. The question of the permission of a One Pound Note Issue in the Colony is also one which has been more than once under discussion in Parliament. Many well qualified to judge, and who have chafed under the Somerset proclamation, adverted to above, believe with reason that this would be a wise and beneficial measure of currency reform. But of this, and kindred topics, anon.

D. D.

March, 1875.

The Telegraph Alphabet for Primary Education.

[THE following interesting notice has been forwarded to us by the Rev. J. M. Russell, B.D., of Cape Town, in reference to a lecture delivered by his brother, the Demonstrator of Anatomy in the University of Edinburgh. It is taken from an Edinburgh paper; and now that practical telegraphy is being extended so rapidly in South Africa we recommend it to the attention of teachers as a matter of practical importance to their pupils. The directory card subjoined to the general description will explain the matter very clearly to anyone who studies it.—ED.]

A meeting of the Scottish Society of Arts was held in the Hall, 117, George-street, last night. Professor Archer, President, occupied the chair, and there was a large attendance of ladies and gentlemen, the audience including the Hon. Bouverie, F. Primrose, and the Misses Primrose, Sir William and Lady Thomson Professor and Mrs. Crum Brown, Miss Hunter Hafton; Professors Hodgson, Turner, and Calderwood; Mr. Angus Fletcher, &c. Dr. Russel, Demonstrator of Anatomy to the University, read a paper on "The telegraphic alphabet as a branch of technical education in primary schools." The lecturer gave an exposition of the structure and uses of the Morse or telegraph alphabet (which was shown by a diagram), advocated its introduction into primary schools, specially those along the coast, and went on to speak of some of the advantages possessed by the alphabet as a means of communication. These were—the extreme simplicity and ease with which it could be learned by very young children; that it helped to prepare for Post Office employment and life at sea; that it was already known all over the world by experts; that it could be used with or without any apparatus—an advantage, which the lecturer believed, was not possessed by any other method of signalling; that it involved no expense; that it formed a good alphabet for the blind; that it taught the sense of time or rhythm; and was important in relation to lighthouses. In concluding his lecture Dr. Russell stated that the Morse alphabet had lately been introduced with marked success by Mr. Munro, of Kilmodan Free Church School, and Mr. M'Intyre, of South Hall public school—teachers to whom he was indebted for sending five pupils, aged from nine to fifteen years, all the way from Argyllshire for the purpose of giving the meeting a practical exhibition (which he did) of the application of the alphabet to sight signals. The apparatus used was an umbrella, a table on which there was a glass filled with water, and a pair of lamps resembling those employed on railways. The lecture throughout was extremely interesting, and the practical exhibition was in the highest degree successful. Sir William Thomson said he had listened with very great pleasure to the interesting communication made by Dr.

Russel, to whom they were indebted not only for the communication, but for all that he had done to enable him to bring forward such a result as had been seen that evening (applause). The general principle of signalling by the Morse alphabet had long been practised in the telegraph office, and also, though in a somewhat different form, in the navy. The system introduced many years ago by Captain Bolton was, in the main, equivalent to that described by Dr. Russell—the peculiarity of the latter system as distinguished from that generally known and practised in the navy being, as noticed by Dr. Russell, that Professor Fleeming Jenkin and the speaker had recommended the use of eclipses instead of flashes of light. Professor Calderwood, on behalf of the Edinburgh School Board, thanked the society for permitting teachers of primary schools to be present, and hoped these gentlemen would be able sufficiently to appreciate what had been shown that evening. Professor Hodgson said that while they all admitted the utility of the plan for the practical purposes brought before them, he thought teachers might recognise further utility of a more general kind (hear, hear). He thought they must all be impressed with the notion that the introduction of the system into primary schools—apart from its practical uses—might enliven the pupils, and give them an additional interest in the usual work of the classes. Mr. Sang, secretary, strongly advocated the introduction of the Morse alphabet upon the attention of teachers of the young. Dr. Russell's paper was remitted to a committee; and another communication on the programme was delayed till a future meeting.

The following will indicate the directions alike for electric and light signal communications :—

MORSE, OR TELEGRAPH ALPHABET.

The letters are made by the use of a short signal called "dot," and a long one called "dash."

A - — B — · · · C — · — · D — · · E · F · · — · G — — · H · · · ·
I · · J · — — — K — · — L — — · · M — — N — · O — — —
P · — — · Q — — · — R · — · S · · · T — U · · — V · · · —
W · — — X — · · — Y — · — — Z — — · · Ch — — — —

The words "Understand," "Repeat," and "Rub out," are not to be spelled, but should be intimated by the following signals :—

Understand - · · — · Repeat · · — — · · Rub out · · · · · · · · ·

The numerals may either be spelled or intimated thus—

1 · — — — — 2 · · — — — 3 · · · — — 4 · · · · — 5 · · · · · 6 — · · · ·
7 — — · · · 8 — — — · · 9 — — — — · 0 — — — — —

TO SIGNAL BY NIGHT.

I. Each person should have a candle, lamp, or other light, and a hat, or board, or other screen to hold in front of the light at pleasure.

II. To make "dot," hold the screen in front of the light a short time. To make "dash," hold it in front of the light three times as long.

III.

1. The length of each interval between the separate *signals* forming a letter must equal the time occupied in signalling "dot."
2. The intervals between the separate *letters* forming a word, must equal at least the time occupied in signalling "dash."
3. The interval between separate *words* must equal the time occupied in signalling three dashes.

Unless the intervals are kept true the message cannot be read.

IV. Always begin by signalling "Understand" twice to allow the opposite person to catch your time, and then let him reply "Understand" before you begin the message.

V. Till you become expert, he should answer "Understand" after every word.

VI. If the receiver miss a word let him send back the last word he understood, and signal "Repeat" after it.

To Signal by Day.

Use some bright objects instead of the lights.

A bit of white paper fixed upon a wall will serve for practice.

Do not be satisfied till you can read and signal eight words in a minute.

A Vindication.

With reference to a point somewhat vehemently contested between Dr. Shaw and Mr. E. J. Dunn, we publish the following extract of a letter from Dr. Atherstone addressed to ourselves. Though not intended for publication the testimony it gives relative to the disputed questions of fact is none the less important. The letter is dated Graham's Town, 24th March, 1875:—

"I can prove incontestibly that Mr. Dunn first started the *pipe* volcanic theory of Bult Fontein and Du Toit's Pan, for it was during my stay there in 1871, long before Cohen had left Europe, I believe,—at least, neither of us had heard of Cohen's being at the Fields at that time, and certainly not of his pipe theory. Besides, Dunn's pamphlet is sufficient proof that he was aware of the volcanic outbursts through pipes, although he did not (as I did) connect them with the origin of the diamonds; but I *published* nothing, and therefore claim nothing; and I know that memorandum books are no proof or authority whatever for anything whatever; still I think you would be amused at the sight of some old pages of mine anent this subject, in which Dunn's name and theories are unmistakably alluded to."

THE CAPE

MONTHLY MAGAZINE.

On Human Barbarity.

More wonder-striking than the wildest romance, and to the full as interesting, is one series of events which the dignity of history has strangely thought fit to ignore. Thanks to this "dignity of history," a man of our day may be fairly well read, and yet be ignorant that merry England in the seventeenth century presented a spectacle that surpassed all the far-famed horrors of the Spanish Inquisition. Yet so it was. Between the years 1603 and 1680 no less than seventy thousand persons were tortured and cruelly put to death by the legislators and divines of that merry land. No life was safe. Every man, woman, and child was at the mercy of any spiteful neighbour. All that had to be done was to prefer a charge of dealings with the Devil, and forthwith the accused was torn away from house and home, examined, tortured, and slain by our most Christian judges. Nor were our pious divines in any way backward in this strange crusade. We find the great Richard Baxter, author of the "Saints' Everlasting Rest," glorying in the fact of an aged Anglican clergyman, verging on eighty, being tortured and hanged. Nor were the learned physicians of that period in any wise more enlightened. Sir Thomas Browne, who wrote his "Religio Medici" in 1642, and his "Treatise on Vulgar Errors" in 1646, appeared as medical witness at the trial of two old women at Bury St. Edmunds. He gave evidence to the effect that the Devil often does act on human bodies. The judge upon that occasion, Sir Matthew Hale, renowned in his day for great learning and piety, said that he "did not doubt in the least that there are witches; firstly, because the Scriptures affirmed it; and secondly, because the wisdom of all nations, particularly of our own, had provided laws against witchcraft." Addison expressed somewhat similar opinions in No. 117 of the *Spectator*; and Blackstone, that great luminary of the law, agreed with him. Later on, in the last century, this cruel and bloodthirsty creed gradually waned away; but still we have no less a man than Wesley himself upholding it in all its horrors.

For the readers of this magazine Holland possesses as much interest as England, and we will therefore take a glance at what was

going on there. One instance will suffice. Towards the close of the seventeenth century a Protestant clergyman, the Rev. Dr. Bekker, was enlightened and courageous enough to utter a protest against the bloody persecutions going on around him. His book was written with affecting earnestness and sincerity, and displayed a vast amount of original research into Pagan, Jewish, Mahommedan, and Christian beliefs. However, the clergy of Holland were furious at it. He had to fly for safety. He was deprived of all his public offices, and of the use of pulpits; and his book was condemned in Synod. From his place of exile he carried on the controversy, and, strange to say, the *savans* (conspicuous among whom was the great Lutheran, Mosheim) were more bitter against him than the ignorant, and not one of them was to be found upon his side.

This study of what went on in less humane times than ours helps to throw a wonderful light on the subject of human barbarity. Therefore some profit may be derived from the contemplation of its revolting atrocities, now that there is a prospect of a Society for the Prevention of Cruelty to Animals being founded in South Africa. It is true that the elements of superstition and fanaticism, so powerful in the one case, are absent in the other. Nevertheless, the great ethical principle of how the public conscience grows and changes, how it is formed and waxes strong, is of equal applicability to both, and is, moreover, full of hope to those who have the cause of humanity at heart. In order that the proposed society may have power to act, some legislation is of course needful. And legislation on such a subject will have to be based on sound ethical reasoning, if it is to be of any real value. Therefore all studies which can be brought to bear upon it become of more or less importance. The great mainspring of cruelty, after all, is nothing else than ignorance. Of all persecutors among us it may be truly said that they know not what they do. The mere spreading abroad, therefore, of the fact that the ill-treatment of the brute creation will be regarded as a crime, cannot of itself fail to work good. The eyes of many will be opened, and their thought-lessness stayed. The attainment of this result alone, did nothing else follow, would be worth striving for. The grosser cases, it is true, will not be met by such considerations. For them the terrors of the law are needed. But, it may be urged by the objectors, the arm of the law cannot reach the majority of instances, inasmuch as they occur in lonely places, where brutal drivers and herds are far away from all human ken, and consequently have unbounded sway over thousands of animals, each of whose quivering flesh and nerves are susceptible of agonies too horrible to think of. Admitting the force of this objection, does it, therefore, follow that we are to do nothing? On the contrary, is it not our bounden duty to do our very utmost to diminish the sum total of earthly anguish? And much assuredly can be done to diminish it. At the worst, it will be practicable for all humanitarians to report to the properly constituted authorities whatever cruelties they may

happen to become cognisant of. And it will also be practicable to make two-legged brutes aware that if they are found in possession of animals whose tongues have been twisted out, eyes gouged, hides scarred and welted, hoofs worn to the quick, bodies foul with neglected disease, starvation, and ill-usage, they themselves shall not be allowed to depart unscathed. Assuredly a wide and promising field for action lies before any well-organized Society for the Prevention of Cruelty to Animals. The community is large enough, enlightened enough, and wealthy enough to contribute the necessary funds. The necessary legislative enactments there can be no great difficulty in obtaining. If once the movement can be got under weigh, there is every reason to anticipate that it will be well supported. Our M.L.C.s and M.L.A.s ought therefore to be nothing loth to do what they can to forward it in all directions. It is one of those few objects for which all men can work together, regardless of prejudices, religious or political, national or local; and that is no small matter, as we all know, in a community so divided as ours, by sectarianism and local jealousies.

To those who may be shocked, and perhaps incredulous, at hearing of such saints as Baxter and Wesley being implicated in the barbarities of the witch creed, it may be some consolation to know that the Established Churches of Europe have, in their time, been no less superstitiously cruel. The literature of the subject is a vast one. From Sweden and Scotland to Spain and Italy, it is to be found in legislative enactments, in resolutions of synods, in records of state trials, and in sermons, books, and tracts innumerable. Some able modern summaries are to be found, though not by any of the greater historians. Among these are Sir Walter Scott's "Letters on Demonology and Witchcraft," Lecky's Rationalism," Reville's "History of the Devil," Upham's "Salem Witchcraft," one of Lowell's essays, and a singularly able article in the *Westminster Review* of January, 1871.

Confining our attention to Christian Europe, we find that until the thirteenth century executions for sorcery were of rare occurrence, though the belief in mystic powers was universal, and the "casting out of devils" was performed by almost every mediæval saint. It was when orthodoxy began to grow alarmed at the revival of learning, and when inquirers into Nature, like Roger Bacon, appeared, that a more severe view was taken of these supposed dealings with Satan. Soon we find the Church Inquisitors everywhere at their deadly work. Towards the end of the fifteenth century the climax was reached. The Bull of Pope Innocent VIII. had the effect of greatly increasing the persecutions. So had the famous "Mallens Maleficarum" (witch hammer) in 1489. This work codified the law, and prescribed the tortures to be used in various cases of alleged demoniacal possession and intercourse. While fire, rack, and gibbet of Church and State were everywhere in constant work, the pens of the learned and the voices of the eloquent were equally busy.

Not a dissentient from the bloodthirsty creed was to be found until Reginald Scott bravely endeavoured, in 1584, to convince his contemporaries of the folly and iniquity of torturing the defenceless accused in so wholesale a manner. His protests had not the slightest effect, however. Even a hundred years later, as we have seen in Bekker's case, the times were not yet ripe for judgment, mercy, and common sense to make good their claims. So tremendous were the persecutions that in Geneva, in the year 1515, within the space of three months the victims numbered five hundred. In Lorraine the learned Inquisitor Remigius boasted that in fifteen years he himself had nine hundred put to death. In the year 1524 there were a thousand executions in the province of Como alone. Many fled to districts where pious zeal raged not quite so fiercely, and whole villages actually became depopulated.

Curiously enough, it appears that this revolting species of cruelty was at its fiercest height in England in the ultra-Protestant days of the Commonwealth. And nowhere have greater atrocities been perpetrated than in Presbyterian Scotland. As lately as in the year 1773 the divines of Presbytery in solemn assembly gave the savage creed the full weight of their allegiance. Happily the times had so far changed that the law would no longer give effect to the wishes of the Church. In the British Islands the last of these legalised murders took place in the year 1722, and the last in Europe was in 1782. Not only did the belief possess everyone, high and low, rich and poor, learned and ignorant, pious and profane; but the victims also were of all classes. In England, in the reign of Henry VI., there was the notable case of the Duchess of Gloucester, and in the reign of Charles I. that of the Duke of Buckingham. In 1541 Earl Hungerford was beheaded for having asked a witch how long Henry VIII. would live. In Scotland, Earl Mar, brother of James III., was bled to death for the alleged crime of having consulted with witches. In 1537 Lady Glamis was executed; and this execution was followed by the burning of fifteen persons at Edinburgh. King James I. wrote a book on "Demonology," and was always a zealous persecutor. On one occasion a certain Dr. Fian was accused of having raised a storm at sea, with the intention of drowning his Sacred Majesty; and the King himself presided at the torturing chamber, and devised new tortures for his writhing victim. During the last forty years of the sixteenth century the executions in Scotland had reached the astounding number of eight thousand. Some recent excavations at Edinburgh have laid bare the remains of some of these sufferers, thereby confirming contemporary reports. To go to a later period, in 1670, Major Weir and his sister were put to death. In 1676 five persons were executed for bewitching Sir G. Maxwell, of Pollock. To Scotland, too, belongs the unenviable notoriety of the last execution in Britain, that of 1722 already mentioned. The victim was an old woman, who was burned to death by order of Captain Ross, the Sheriff of Sutherland.

The attitude assumed by the Anglican Church with respect to these barbarities is well worth noticing. That she has been the "nursing mother" of much that is good is unquestionable; but at the same time it must be admitted that she has a convenient knack of forgetting whatsoever does not happen to resound to her own credit. Her pastors have always much to tell us of Diocletian and "Bloody" Mary—of the Holy Inquisition, and the Massacre of Saint Bartholomew's Day; but they drop no hint of the far greater blood-shedding of which their own spiritual predecessors have been guilty. Yet the scenes we have just been noticing in Presbyterian Scotland, in Protestant Holland, and in Christian Europe generally, have had their unhappy parallel within the fold of the Anglican Church in her very palmiest days. From the days of the Reformation until the end of the seventeenth century her hands were imbrued in blood in a manner that was as despicably superstitious as it was barbarously cruel. "Thou shalt not suffer a witch to live" was a text she never tired of. Upon this fertile theme Archbishop Cranmer was wont to discourse when he fain would stir up his clergy to greater activity in witch seeking. Bishop Jewell, in preaching before Queen Elizabeth, besought her Majesty to increase the severity of the laws, and had much to say as to how her Grace's subjects pined away, and how their flesh rotted under the spells of wicked enchanters. This, the worthy Bishop asserted, he had himself repeatedly witnessed. Under the Attorney-Generalship of Sir Edward Coke a law was passed sentencing witches to death upon the first conviction, and twelve bishops sat on the commission to which it was rererred. At the very time when our Authorised Version of the Bible was brought out, Convocation prohibited the inferior clergy from exorcising without a Bishop's license. This was in the days of Hooker and Jeremy Taylor. A somewhat kindred superstition—that of touching for the king's evil—was of such vitality that the ritual for it is to be found in the Prayer-books of George the Second's reign. Until the Georgian era, also, an annual sermon was preached at Huntingdon by a D.D. from Cambridge, in compliance with an endowment granted for that purpose out of the estate of the three witches of Warbois, who were executed in 1593. The "judicious" Hooker waxed eloquent in describing how Evil Spirits are dwelling everywhere around us, in caves and dens, in air, water, and earth, ever ready to entrap the souls of the unwary. Bishop Hall declared that he "should hate to be guilty of so much incredulity as to charge so many grave judges and credible historians with lies," as regards their testimony about witches and sorcerers making pacts with Satan, and doing him "beastly homage." The Reverend Meric Casaubon, D.D., whose book against the Catholics gained him Church preferment under Charles I., wrote a voluminous work to prove the mathematician, Dee, a conjuror. One of Charles the Second's chaplains, Joseph Glanvil, a divine of real genius and great learning, well versed in mental science, too, wrote eloquently and

earnestly to maintain the current belief. He gravely maintained that witches are in the habit of anointing themselves, and passing up the chimney to distant places. They change themselves into cats, raise tempests, and bewitch whomsoever they will. Dr. Henry Moore, of Christ's College, Cambridge, and Dr. Calamy were also voluminous authors in this behalf. Another of the same stamp was William Perkins, author of the "Damned Art of Witchcraft," whom Fuller, in his "Worthies," selected as the type *par excellence* of the "Faithful Minister." But enough has now been said to show the nature of the part taken by the Anglican Church in these ignoble tragedies. Many other phases of history teach us the same lesson. Things hid from the wise and prudent are revealed unto babes. It is not from Church dignitaries, or from religious establishments, that we are to expect that enthusiasm of humanity which finds scope in social and religious reforms. A self-complacent orthodoxy naturally takes more interest in maintaining her own peculiar creeds and ceremonies than in striking out new lines of thought. Therefore the aid which comes to suffering humanity invariably comes from without. In this manner alone is the explanation to be found of those amazing anomalies which we have just been recounting.

The one great use of comparing the present with the past is to obtain a gauge whereby to measure the possibilities of the future, and to ascertain what objects it is now worth our while to strive for. And assuredly, if any such gauge be reliable, great and glorious are the prospects of coming ages. Great, too, is the probability that future ages will look upon this generation, including even the highly educated and religious portion of it, as having been prejudiced, superstitious, and carelessly cruel. However that may be, it is certainly unquestionable that in the world at large there is a great deal of barbarity now going on which it is quite possible to prevent. In this respect, at all events, the path of duty is plain enough. As yet the deeper issues opened up by the contemplation of the atrocities of bygone ages must not be too stringently dwelt upon. The ripening of the times, and the successive new births of the public conscience, will always be very gradual. This cannot be better described than in the words of Tennyson—

> The old order changeth, yielding place to new;
> And God fulfils Himself in many ways,
> Lest one good custom should corrupt the world.

S. C. N.

A Voice from the Unlearned on Scientific Discoveries.

This is an age in which we are constantly expecting to be startled by something new. Like the old Athenian frequenters of the Areopagus we are not content unless we either tell or hear of some new thing.

Not so long ago we saw a book, published by a mathematical merchant or banker, which established "as clear as mud" an exact ratio between the radius and area of a circle! To his everlasting honour be it said he fought the rest of the scientific world single-handed, hitting at the chief mathematicians much after the manner of Don Quixote at the wind mills—with equal pluck and with about the same result, for he was fearfully knocked about.

But it is the great scientific men themselves who startle us most. The Bishop of Natal takes the lead by telling us we may believe as much of the Bible as we can reasonably understand. Now we, the great unlearned—not unwashed, for we do wash—feel very much inclined to go with the Bishop, as far as we can understand *him;* but we have one or two difficulties. In the first place, we find that he is not always perfectly accurate in his data; and secondly, we cannot quite agree as to which are the erroneous parts of the Bible, so that at last the majority of us have concluded to throw Dr. Colenso overboard, and steer our course through life by the Bible, until we can find a better guide.

But we want something new, and most opportunely up springs Dr. Darwin with his development theory. Here is something to startle us properly,—something quite out of the common; and the Doctor brings a great deal of learning, much practical knowledge and observation, besides a considerable colouring of reason, to bear on the subject; he makes converts of several scientific men, so that we begin at last to feel somewhat reconciled to the idea that we may possibly be descended from some of the lower animals. The monkeys, however, stagger us; we do not at all like the notion of being so nearly related to *them.* And yet there is something very human about them too. For instance, our dogs once treed a monkey: there was a great barking and chattering of course, which soon attracted us to the spot to see the fun. We found our six hundredth cousin (or whatever the degree of consanguinity may have been) in mortal terror. He was on a small bush, just out of reach of the dogs, but quite within reach of our arm. After looking on for a few minutes we were struck by a brilliant and charitable idea. Some bread was sent for, which we offered to our afflicted poor relation, approaching him somewhat cautiously, for fear he might spring upon us. To our utter astonishment he took the bread quite naturally with his hand, and making a queer sort of grimace at the dogs, who were by this time nearly mad with fury, he settled down to his dinner as composedly as if there was no danger at all. From that moment he seemed to regard the dogs as

dirt, and evidently looked upon us as a friend and brother. Of course, he having as it were partaken of our salt, we could do no less than protect him; so we whipped off the dogs and left our friend to go on his way rejoicing. But sad to relate, like many a friend of closer relationship, the ungrateful little wretch, finding he had no longer need of our services, a few days later brought a whole troop of his companions and robbed our mealie garden.

From Brother Monkey to Brother Crab is but a hop, skip, and a jump; and we have known a crab show a remarkable amount of ingenuity. We recollect the circumstance well, although it happened quite a quarter of a century ago. We were a somewhat overgrown lad in those days, and very fond of old Isaac Walton's gentle art. We are partial to it still. It is a wicked and cruel practice to catch fish with a hook, for do not all the good little books tell us so? However, we are bound to be both wicked and cruel in some things, —even the writers of the good little story books are not above eating veal, and they well know by what an abominably cruel practice it is made white. There must be something cruel in our nature,—a something we may have inherited from one of our pre-humanity ancestors,—which remark reminds us that we are treating our friend the crab with but scant courtesy. Just look at him sitting on the old stump, half in and half out of the water, with his pair of cold, relentless nippers partly open, and ready to snap up a passing "gilly"* or any other fish,—observe, that old stump is on the opposite side of the stream from the fisherman, who is reclining on a steep grassy bank, which slopes regularly to the water's edge. It is one of those glorious, quiet, hot days peculiar to our favoured Colony. That big fly on the willow tree is keeping up a pleasant, monotonous tsik, tsik, tse-e-e-e-e-e-e-e-e-e, &c., D.C. *ad. lib.* The willows are casting a cool shade over the spot, only here and there admitting a ray or two of light which surreptitiously creep through and just gild the edges of the graceful maiden hair fern that is dipping the points of its fronds in the crystal stream. It is such a spot as poets dream of, and prosaic youths as our fisherman simply luxuriate in; but let us not forget our relative the crab. See! he is making a move, and is now gently ascending to the very summit of the old stump; having attained an elevation of about three feet above the water, he adjusts his binoculars and makes a careful survey of his surroundings. Just at this moment a gilly flashes up into the light, wriggles helplessly for a few moments on the hook, and is then thrown on the bank behind the angler. Mr. Crab has seen enough. He quietly runs down the stump into the water, and shortly afterwards appears at our feet. We suddenly turn our head to look at him, which causes him to disappear instantly, and this is done two or three times. At last adjusting our position so that we command a view of the whole bank without

* Gilly is the common name of a small fish found in most of the Eastern Province Streams.

moving at all, we wait to see what our friend intends doing. There he comes again, and evidently supposing we have forgotten him, cautiously creeps up the bank, all the while watching us intently with his telescopic eyes. He has about twelve or fifteen feet to go, which takes him some time, but eventually he reaches the fish, and, seizing the nearest, rushes headlong into the water, without once stopping to look behind him. We allow him to escape, for though we detest his morals we admire his ingenuity; but what is the end of it? simply this: Mr. Crab re-crosses the stream, mounts to his old position on the stump, and there impudently devours his ill-gotten dinner before our very eyes!

What we want to ask Mr. Darwin is this,—Is the monkey developed out of the crab, or the crab out of the monkey? To our mind both appear to be very perfect rascals in their way.

But we need not stop at mammalian or even crustacean life to discover "excentricities of genius;" the insect world will afford many an example. We shall, however, be content to relate one instance which came more immediately under our observation. We had imprisoned the Queen of a swarm of bees in a sliding match-box (common Tandstickor), having purposely selected one that did not open easily, and for additional security we fastened round it several coils of strong thread, and having cut a hole in the top for ventilation, and to admit of her being fed by her devoted subjects, we suspended the box in the hive, and so left it for a month. Thinking sufficient time had been given the bees to settle down, we now opened the hive for the purpose of liberating our captive, when, to our utter astonishment, we found the box open! The thread had been cut, and we suppose at least one hundred bee-power must have been exerted to force open the slide. "These be truths!" but what we want to know from Dr. Darwin is this,—Are bees developed out of crabs or monkeys, or *vice versa?* From a moral stand point we should be inclined to regard the bee as the representative of a higher type of life than either the crab or monkey,—he, at least, is no rascally thief, but gets an honest living by hard work, and is loyal to his queen.

We are among those who believe that the *truth* must be followed, no matter where it may lead to; but in treating of such important matters as creation, "The Origin of Species," "The Descent of Man," &c., the evidence must be most conclusive before we dare determine a single step,—there must be nothing conjectural or hypothetical. Let a single instance be clearly established of the development of any form of life into a *higher* form, becoming in such higher form a distinct and permanent species, and we are prepared to admit that a great and important step is gained towards proving the theory of development; warranting at all events the conclusion that such a development is possible.

Any hybrid form of life proves nothing but the possibility of degradation, or at least of stagnation. For if it is between forms of

life differing in degree, it must be a degradation of the higher form; and, on the other hand, if between forms equal in degree it cannot be an improvement, and therefore is nothing better than stagnation. To us, the unlearned, it is also a very difficult matter to determine which is the higher of any two forms of life,—with the exception of man in his relation to the lower animals. For example, let us take the horse in his relationship to the ass,—and here let us bear in mind that all scientific classification is arbitrary, based on certain points of resemblance, and affords no proof of *absolute* relationship,—both animals appear to us very perfect; they have certainly many points of resemblance, and undoubtedly approach much nearer to each other than do man and the ape, yet who is to determine the higher form? Could the horse have been developed out of the ass, or is it not equally reasonable to conclude that the ass has been developed out of the horse; and is it not also possible that they may be perfectly independent forms of life? The only intermediate form of which we have any proof is the *sterile mule*,—an evident degradation of either form; it is also a stagnation, for the variety dies out. Some people might say the horse is undoubtedly a higher form of life than the ass, because he is larger and stronger; but in this respect he would rank above man also. First prove the common origin, and we shall be ready to grant that the finer specimen is the representation of a higher form of life; but what proof is there of a common origin?

Now between man and the ape there can be no possible doubt as to which is the higher form of life. It is not necessary to take the physical conformation into consideration at all,—the mind of man stands so prominently above that of the ape, that we can safely challenge the whole scientific world to discover a mental connecting link at all events.

Oh! Dr. Darwin, Dr. Darwin! if you really do want to prove your development theory to the satisfaction of ignorant people like ourselves you must "go slow," as Brother Jonathan has it,—just hark back, as we do in hunting, establish the first step, which is this: *That there has been a case of actual development of a new distinct species out of an old.* Plant yourself securely on this step, and you will be in a position to go on, but please do not even mention hybrids; we ignorant people know nearly as much about them as you do, and they only form varieties, not species.

We think very highly of you, Dr. Darwin; you are a hard-working, careful, honest, clever man. Go on, try again! You have nearly found out something, and you have possibly done us some good: at all events you have done us no harm; but *at present* our verdict regarding the development theory must be "not proven."

Let us now turn briefly to the old and long exploded theory of creation by the concussion of self-existing atoms. We are not so much startled by the theory itself as by its finding a new advocate in a man of Professor Tyndall's scientific attainments. That he

should believe in natural laws which are all potent and unalterable without the intervention of a lawgiver is a matter for much astonishment. Let us by way of argument allow that the elementary atoms may have existed from all eternity, floating in infinite space. Is it not quite as reasonable, nay, more reasonable, to believe that an all powerful Being has the same quality of self-existence from all eternity? Are there more scientific difficulties in the way of the belief in a Creator than in that of the power of atoms to fashion themselves into living shapes, not only so as to be adapted to our present requirements, but also with a view to future developments of life?

Let us try one specimen of creation by the atomic process. Hi, Presto! The atoms kick up a dust, or, as Artemus Ward would say, concush each other, and there is—what? an Ant-eater,—a toothless animal with strong burrowing claws, and great muscular power for working those natural shovels, with a wonderful slimy extensile tongue (of what use?), but no teeth. These atoms have certainly put together a very curious animal, but on what is it to feed? Die it must. Not a bit of it; these clever, omniscient atoms are far too ingenious to let him die for want of food. Presto! again; no end of a dust this time. There you are,—countless myriads of ants appear on the earth, with very clever little heads of their own, too, and a perfect system of monarchical government, with their armies of soldiers and labourers, and what not. Plenty of use for the ant-eater's singular tongue now; but the ants also must have food. Presto! again—no, it is too absurd, we cannot go on. To us ignorant people there appears to be such unity of design in the works of creation, and yet such variety throughout, that we cannot but look for unity in the Designer, with a mind capable of regulating and arranging all the various materials of which the universe is built up. On our own planet, if we look into the far distant past we cannot but mark, at the very dawn of creation, a preparation for the present state of things. Coal and metals have been stored up; rocks have become disintegrated and chemically changed, until alluvial soil has been formed fit for the growth of various plants, and but for some of these ancient preparations Professor Tyndall himself might have been but a very ordinary kind of savage, using stone implements, and with a sky-blue shirt collar painted on his natural skin by way of dress.

I suppose we common people are very stupid, but we cannot help seeing the Master-hand in everything around us. Yon mountain with its sombre forests—its slopes of living green gemmed with many a brilliant flower, its crystal springs, sources of noble rivers, all point to that Master-hand. But that Hand beckons us back into the past, and as we follow we are wonderstruck at the amount of activity displayed in carrying on the business of the world. First we see animals much resembling those about us in the present time; then huge flying and crawling dragons that might even have scared

St. George, had he lived in those days, but we fear them not, for the Hand beckons us on; through forests of tree ferns and curious creeping beasts, and slime and mud, and a dark, misty atmosphere; and yet we follow on, past lower forms of life till all is still,—chaos reigns, and there is organic life no more; we have reached the outermost landmark of creation, beyond which we cannot, dare not, follow. The Hand now unfolds a scroll, and as it passes on through a halo of glory we read, emblazoned in indelible characters, these words,

"I AM!"

A. E. M.

Law Reform.

III.

A Judicial Commission was appointed at the close of the last session of Parliament, to which reference was made in the second article on the subject of Law Reform in these pages.

The Commission was not constituted as was suggested, nor as was expected; nor was much consideration given to any subject before it save the constitution of the Eastern Districts Court.

Those questions which were looked upon as even of paramount importance, viz., the improvement and consolidation of the Criminal Law, the Insolvency Law, Improvements in our Convict System, &c., were not once even alluded to.

Evidence was taken, but as it has not yet been published, no complete analysis of it can be made. The report of the Commission, however, is before the public, and it has already been so fully commented on at public meetings, and in the press; and as it is likely to form the subject of, it is feared, much angry discussion in the ensuing session of Parliament, it is not considered expedient, at present, more fully to refer to it.

The old arguments about circuits being hurried over, were, of course, repeated. Lord Bacon, so long as three centuries back, refers to the same complaint, and it is spoken of in the evidence taken before the Commission of 1845. In the debate about the Eastern Districts Court in 1864 it was one of the stock arguments; it has long been a standing complaint in England; it is referred to in the report of the Judicial Commission there, lately published; and it is not surprising that it should be repeated, *usque ad nauseam*, amongst us when a new system is sought to be introduced.

And it is impossible to prevent such a state of things, especially under the present course of law procedure in the Circuit Courts.

As to the statement that a judge leaves a town hurriedly, in order

that he may get home sooner, a little consideration makes the fallacy of such an assertion so apparent, that one can only pity the stupidity of the authors of it. How will hurriedly leaving Queen's Town hasten the arrival home of a judge, who cannot open the sessions at any subsequent town one hour before the time fixed by the Governor's proclamation?

It can scarcely be supposed that the Legislature will sanction any such system, approaching not merely the absurd, but even the grotesque, of having one judge sent for eight months in the year to the East—six of which months he is to reside at Port Elizabeth, and then he is to leave on circuit through the various Eastern towns, which is estimated to occupy two months; but which will really take about ten weeks if not more.

Even assuming that the time of arrival and departure of the steamers could be calculated upon with the same certainty as an eclipse of the sun, or a transit of Venus, the system would be objectionable; but with all the casualties that might arise, and with all the precautions that must be taken to guard against delay, in the punctual arrival of the judge at the various towns where he has to hold sessions, it will be found, to use a homely, but expressive phrase, that the plan is not workable, and the expense entailed would exceed the salaries of two additional judges. You would have first the annual rent of a furnished house at Port Elizabeth, where rents are double, at the very least, what they are in any other part of the Colony. There would be the salaries of servants, and many other items which will suggest themselves to any person accustomed to keep house in the style in which gentlemen are supposed to live. The judge arriving in Port Elizabeth, to replace the one going on circuit, and who, to avoid any chance of delay, must in some cases arrive several days before the time fixed for the departure of his brother judge, must have some accommodation for himself, clerk, servants, &c. It is not necessary to enter into minutiæ. During this time he must go to an hotel, if he can get rooms there, which is by no means a certainty.

Then the process of taking up the house from one judge and giving it over to another, "counting up the spoons," as Mark Twain says, charges for breakages, &c., and the newly arrived judge enters upon the occupation of a house, not his own; to be waited on by servants hired by the Civil Commissioner, and who will therefore be almost altogether independent of the person who ought to have some control over them. Twenty-five per cent. may be added to the cost of a house kept up on such a system, beyond that of one kept by and under the control of a private individual; to be added, again, to these various items in the expenditure for passage-money by the steamers. All go to prove that the plan is not *workable*.

The constitution of a Court of Appeal is no doubt a difficulty, with only six judges, if hypercritically examined; there is no plan to which objections may not be raised, but nevertheless, practically,

there would be little chance of any difficulty arising in the constitution of a Court as proposed by Mr. Ross-Johnson's Bill.

The alternative of increasing the number of judges to seven is deserving of very great consideration, as removing, at once, all difficulties in the way of forming an Appellate Court. And the cost would be less than the proposed plan of the "itinerating judges" at Port Elizabeth; especially if the office of public prosecutor be made permanent. The establishment of the Attorney-General could then be reduced, as is very evident it might now be, without any inconvenience to the public service, looking at the numerous employments not connected with the Attorney-General's office, which the clerk to the Attorney-General has recently and consecutively been engaged in. The fourth judge would, as proposed, have conducted before him all the business relating to minors, lunatics, &c., under the system suggested in a former article; and also would more carefully administer the Insolvent Law, even in its present most imperfect state. By this means a further saving would be effected by the abolition of some of the staff in the Master's office, and having only one Master or Registrar.

The circumstances which gave rise to the system of the funds of minors being placed in the custody of the Bank of England instead of being in the hands of private individuals arose out of the misappropriation by the masters in Chancery of the funds in their hands.

They, like many others, were tempted by the advantages held out by the prospectuses of the infamous South Sea Scheme. The whole nation seemed to be infected with a spirit of avaricious enterprise; and so great was the public infatuation that in a short time original shares of a hundred pounds of South Sea Stock sold for eight hundred and twenty pounds; and at the opening of the books after Midsummer the price rose to a thousand per cent., including the Midsummer dividend. But at length the people awoke from their delirium. The value of South Sea Stock fell as rapidly as it had risen. By this unexampled revolution an incredible number of families were involved in ruin.

Amongst the speculators of the scheme were several of the masters of the High Court of Chancery. When the bubble burst these men, after the sale of their effects, were deficient in their cash £81,851 19s. 11¼d., and but for the sudden bursting of the bubble they might still have carried on their system of speculating with the funds of others; of course never intending to defraud, but relying upon realizing a large fortune and being enabled to replace the sums which they had taken for the purposes of speculation.

"The money with which the chancery masters had speculated was money of suitors entrusted to their hands on behalf of the court. The court, fulfilling the royal duty of *parens patriæ*, had in its custody the property of widows, infants, orphans, and lunatics, who had no other protection. The malversation of its officers was of no ordinary kind.

"The High Court of Chancery, in the person of its officers, was guilty of fraudulent trusteeship, and by every principle which it stood bound to maintain, and on which its own jurisdiction rested, was self-condemned. The property and effects of the defaulters were sold, and Parliament covered the final deficiency by laying a new stamp burden on suitors, who had in no way, except by suffering, been parties to the fraud.

"The excuse offered by the masters was an accusation against the Lord Chancellor, with whose reputation rumour had been busy. Lords Oxford and Morpeth, as trustees for a lunatic lady, petitioned for protection against the protector of the helpless; averring that he had utilized for his own purposes and imperilled the money of their ward.

"The Lord Chancellor (Lord Macclesfield) was put upon his trial, and was accused, amongst other charges, of having borrowed at various times large sums of money from the masters out of suitors' money in their hands for his own private use and advantage.

"He was found guilty by his peers, and was sentenced to pay a fine of £30,000, and to be imprisoned in the tower till payment should be made.

"The immediate consequence of his conviction was the establishment of the office of Accountant-General in Chancery, and the transfer to the custody of the Bank of England of all the securities and moneys which had before been left with the masters and six clerks in chancery.

"The Accountant-General was in future to be the conduit pipe through which the money was to be paid in and paid out. The Bank of England was to be the depository of the valuables; and the masters were to be but the conjurers whose orders the money was to obey without ever coming into their hands. This very great improvement on the previous state of things was alone worth the fight that had been made."*

This is the improvement suggested in the management of the Guardian's fund in this Colony.

This question was not considered before the Commission with the care its importance deserves; and until a new and more perfect system of dealing with the property of minors is inaugurated, it would be difficult fully to point out to persons unacquainted with all the details of such a system how fully it would give occupation to a fourth judge, who would sit alone, but who would be available for the Court of Appeal. A Court of five judges *anywhere* in the Colony, except sitting as a Court of Appeal, would be a waste of judicial strength, and would not be likely to be attended with those advantages that some sanguine people anticipate. Although each of the three Common Law Courts at Westminster is composed of six judges, as a fact, except in new trial cases and appeals, very seldom more than

* *Edinburgh Review.*

three judges sit *in banco;* one of the six attends to election petitions (it was for this purpose that, in 1868, the number of the judges was increased to six in each Court); another is engaged at *Nisi Prius*, reducing the number to four; and one of the four has often other business to attend to; so that, as a glance at the *Times* or any other London newspaper will show, seldom more than three judges ever sit together. If this number be sufficient for the important and complicated business that comes before the English Courts, what will be said of the necessity of having five judges to dispose of the very simple, and oftentimes mere routine, business that arises in our Law Courts? It may be said that the difficulties about the judges' arrival at a fixed time are exaggerated, but experience proves the contrary; and it must be borne in mind that the delay of a judge arriving in a town at the appointed time means the detention of jurors, witnesses, policemen, magistrates, and others, causing great expense, and an amount of inconvenience, and perhaps loss, which cannot even be estimated by any mere pecuniary calculation. It will be a most unfortunate circumstance for the country if any measure be passed which will ultimately turn out a failure. Already the mere rumour of the report being acted upon has caused a sensible diminution in the value of property in some parts of the Eastern Districts.

It is a mistake to suppose that professional men will have the same confidence in a one-judge Court as in one composed even of the objectionable number of two; but a one-judge Court, with an itinerating judge, who will partly hear a case upon an interlocutory application, and then leave it for another judge, who may not take the same view of the case, and who, perhaps, may not have the features of it placed before him in the same aspect as they were presented to the judge who made the original order, will lead to such complications as will not only prevent the proper administration of justice; but, with the ablest judges acting under such a system, bring it into contempt, and ultimately render the "itinerating one-judge court" a worthless farce. Very great additional labour would be thrown on the judge residing in the Eastern Districts. He would have to review all the magistrates' decisions, which duty is at present divided between the two judges; and in case of illness of the solitary judge, or a great press of business in his Court, the cases for review would have to stand over, causing, perhaps, injustice to prisoners undergoing an illegal sentence. The general business might also be delayed in the case of the illness of the single judge. The personal convenience of the judge and the justice of obliging him to remain on uninterrupted duty for eight months—a duty never yet imposed upon any judge of the Supreme Court—are questions also entitled to some consideration.

With reference to the Criminal Law Amendment, one of the witnesses before the Commission (Mr. Justice Dwyer) suggested that the judges before whom sentences of magistrates come for review, should have the power at their discretion to bring any cases

before the full Court in order to have such sentences as should seem to them too severe reduced; and in the case of sentences of flogging, that such Court should altogether remit or commute such sentences.

The punishment of flogging, so necessary at times, and yet so degrading and severe, is one that ought not to be in the power of magistrates to inflict, especially when the jurisdiction of such magistrates often devolves upon very young and inexperienced men when called upon to act as magistrates. A noble lord lately stated at a public meeting in England, that from *his own* experience of that form of punishment at school, and his subsequent observation of the effects of it in after life, he could not approve of its infliction except on very rare occasions. Some of the most experienced magistrates in the Colony are of opinion that it demoralises both those who inflict it and those upon whom it is inflicted; while some of the young acting magistrates, and those recently appointed, begin their judicial career as if Byron's advice to schoolmasters was the most proper to follow:—

> "Oh ye who teach the ingenuous youth of nations—
> England, France, Holland, Germany, and Spain—
> I pray you whip them well on all occasions,
> T'will mend their manners—never mind the pain."

On the Study of Geology.

By Geo. W. Stow, F.G.S. and F.R.G.S.

PART III.

Having thus in the previous portions of these papers followed, however imperfectly, the course of the great stream of life as shown by "The Study of Geology" in *the Northern Hemisphere*, it is but natural that the question should be asked, *what* has this same study *revealed* with regard to *the country in which we live?*

It must be confessed that notwithstanding the zealous labours of a few, we do not possess much *definite* information on the subject. The efforts that have been made have been, unfortunately, too scattered, and the realities of the stern struggles of life have prevented men (however strong may have been their love for the good cause) from devoting themselves as exclusively to so great a work as they might have done under more propitious circumstances. I shall therefore confine my remarks to such portions of the country as I have been myself enabled to examine; and scanty however as the materials are, still they shed considerable light upon the past history of South Africa. They demonstrate to us that at a very early age the conditions of life were very similar to those that

existed in Europe during the *Devonian period*,—that the ocean of those days swarmed with its characteristic *Trilobites;* that its rocks were covered with its long-stemmed *Encrinites* and its *Corals;* and that the *Orthis*, the *Spirifer*, and *Strophomena* lived in its seas. It appears highly probable that a large portion of South Africa was covered with that ancient ocean; and it is not at all unlikely that some of the Karoo beds are resting upon rocks of this age. They are found largely developed in the neighbourhood of Port Elizabeth and St. Francis Bay, stretching inland and forming a great part of the Winterhoek and Cockscomb Mountains; and in the extreme east, according to a German authority, the same rocks are even more extensively exposed in the country south of the Lower Limpopo.

At the close of their deposition these evidently emerged from the ocean, and remained dry land for an incalculable period, as we find in the districts I am speaking of that at the time when a portion of them was again submerged, so great a change had taken place in the different types of life that a *Jurassic Fauna* filled up the place of the ancient inhabitants. This vast blank in the life-history of South Africa—in the portion of it to which I have alluded—is no doubt owing to several causes, two of the principal ones being: first, that being raised above the sea no large deposits, with the exception of those formed by lakes or rivers, would be at all likely to take place; secondly, from the same reason, the exposed rocks would be continually subject to the disintegration and denudation caused by atmospheric influences; and it is not at all unlikely that the enormous amount of denudation to which they were subjected must have been greatly augmented some considerable time previous to the deposition of the *Jurassic rocks*, by a climate equal to the present Antarctic in severity, similar to that suggested as existing in the Northern Hemisphere during the latter part of the *Permian period*, thus proving that the southern portions of the earth were subjected in their turn to the same extreme vicissitudes of temperature as those described as occurring north of the Equator.

The evidences of these wonderful climatal changes are to be found in the immense accumulations of an old conglomerate rock, that seems as if it were portions of a deposit that had once fringed the shores of the ancient ocean, and which has been called by the great Geological pioneer of South Africa, Andrew Geddes Bain, "The *Enon Conglomerate*" According to Dr. Atherstone it varies in thickness from 200 to 740 feet.

The great roll of the ocean, the rise and fall of its tides, the tremendous rush of its mighty storm waves, all tend, as we know, to sweep away and level everything before them; but here we find enormous masses of *Conglomerate* piled up along the irregularities and indentations of the ancient coast several hundreds of feet thick.

In Europe we should be told that these were strong presumptive proofs of *an early Glacial Epoch;* and for myself I cannot imagine how witnesses that are deemed to prove so satisfactorily occurrences

of this kind north of the Line can be dragged in to prove the contrary south of it.

Nature is uniform in all her operations. Her laws are universal in their application; and we are led to believe that like causes *must* necessarily produce like effects *in all parts* of the known universe.

Notwithstanding, however, this tremendous gap in the Uitenhage series of rocks, there cannot be the slightest doubt but that the sequence of life was identical in both Hemispheres.

In this last case the approaching Antarctic cold gradually drove northward to more congenial regions the animal life that once filled the seas; after which it must have held this portion of the world bound in its icy chains for so long a time that when its severity was sufficiently mitigated to allow another migration southward, the ancient types of life had long become extinct in the warmer latitudes, and other and more varied forms had taken their place.

At the same time it is not at all likely that the *Devonian rocks* of Europe were *contemporaneous* with those of Southern Africa. Vast periods of time most probably intervened. The migration of these *Devonian Trilobites* and *Mollusca* over such immense areas from their original centres, wherever they may have been, must have necessarily occupied enormous periods, and they may even have been long extinct in the portions of the earth they originally inhabited from alterations in its physical conditions before their descendants had reached the outer limits of their wanderings; but notwithstanding these great differences in time, we need not fear that they could lead to any confusion or reversal of the order of nature: thus the same great law in the succession of either animal or vegetable forms held good in every region of the known earth.

Wherever we may search we need not expect to find the *Carboniferous* types of life preceding the *Devonian*; the *Jurassic*, the *Carboniferous*, the *Cretaceous*, the *Jurassic* or the *Tertiary* or *Post-Pliocene*, the *Cretaceous*, any more in the Southern than in the Northern Hemisphere.

When the Geology of South Africa has been more thoroughly studied, connecting links may possibly be discovered that will in some measure bridge over the wide chasm that occurs in the formations of Port Elizabeth and Uitenhage.

One thing seems certain, that during this great interval sufficient land had emerged from the *Devonian ocean* to form a Southern Continent, of very different outline to the present,—that upon this continent the Flora was at one time of the true *Carboniferous type*, and *Lepidodendra*, *Sigillariæ*, and other kindred forms flourished in a congenial climate is proved by their remains that are entombed in rocks in the neighbourhood of the Kowie, &c. A large portion of South Africa being at that time dry land appears to have prevented any large marine deposits from having been formed, and even those that accumulated were most of them denuded and carried away.

During this long period also it is not at all unlikely that the

erosion of the enormous lake-basin that was afterwards filled with those marvellously extensive Karoo (or *Dicynodon*) beds took place. By what agency this was effected is at present undecided; but it is wonderfully suggestive, when we take into consideration the great prevalence of large deposits of an ancient *Conglomerate* containing immense angular and subangular boulders cropping out so frequently upon its northern boundaries; and as equally as extensive so-called "Claystone Porphyry" almost along its entire southern limits.

This latter, although some have pronounced it to be "igneous," still my old friend, the late Dr. Rubidge, certainly the most talented Geologist that South Africa has yet possessed, maintained that it was without doubt of aqueous origin. Leaving this question to be permanently decided by future research, we will strive to trace, as far as our present knowledge allows us, the direction of this old-world continent. From this we find that it must have extended from the great *Jurassic gulph* or estuary that then occupied the whole of the country through which the Zwartkops and Lower Sundays River now flow, to the shores of the Atlantic on the West, and probably much farther in the same direction, as the old rocks there and abruptly along the coast; and which must have been scraped in this manner by the action of the present ocean. Towards the north these same rocks stretch to an unknown distance beyond the Kalihari desert. From thence eastward to the mouths of the Zambesi and Limpopo, where, from the fossiliferous remains that have been found there, the *Jurassic sea* must have made deep indentations into the ancient coast line. Turning again from these last points towards the south, the eastern and southern boundaries cannot be defined, but it must have certainly extended far to the eastward, thus occupying what is now a portion of the bed of the present Indian Ocean.

Its outline from the occurrences of the deep gulph, like indentations alluded to, was most probably very irregular; and as the fossiliferous contents of the rocks of Southern Africa, Central India, and Western Australia, were in many instances during the formation of the rocks we are now speaking of *identical*, there can be but little doubt but that these now widely separated lands were once *continuous*, and were portions of the same continent, over which both animals and plants could migrate without obstruction.

But how different were the features even of the fragments that were left of that old continent to those we see at present. The central and deepest portions of its wonderful lake district are now occupied by our highest mountain ranges, such as the Sneeuwberg, the Stormberg, and the Drakensberg!

The Vaal, the Orange, and a host of minor rivers, had then no existence; but large and important streams, such as the ancient rivers of the Kalihari then flowed into this central lake system.

It seems almost certain that the great outlet to all these waters was in those days to the south, instead of to the westward as it is

now. That instead of one enormous accumulation of water sufficiently large to be styled a fresh water sea, the central portion was at one time filled up with chains of large lakes somewhat analagous to the present condition of Central Tropical Africa, separated by swamps and marshes with shallow beds of water, seems more than probable—in fact is proved—by the quantity of ripple-marked rocks that is met with in this immense lacustrine area. These fresh water deposits are many thousands of feet thick; the period of duration, therefore, of this state of things must have been incalculable.

During the whole of this time no trace of any terrestrial mammal has yet been found.

These old lakes were inhabited by strange races of reptiles, such as numerous *Labyrinthodons*, some of them of large size; great *Dicynodons*, and monsters of the same type as the *Dinosaurians* of the Northern Hemisphere.

The flora was equally strange, with its *Ferns* and *Palxoyamias*, while during the latter portions of this great lake period forests full of large *Coniferous* trees must have flourished, and covered what are now treeless tracts for hundreds of miles.

At one time, in the seas that surrounded this strange old land, *Ammonites* abounded, together with beautiful species of *Trigoniæ*, *Cucullxa*, and other shells that seem to evince a warm or tropical climate.

From this period, judging from the fossiliferous belts that follow, it appears probable that there was a gradual moderating of temperature with an equally gradual elevation of the coast.

The seas that must have had at one time during this period a depth of some hundreds of feet over the site of the present town of Uitenhage, gradually receded from the great *Jurassic gulph*. Whilst doing so, only a portion of its former space was occupied by a number of shallow bays and lagoons.

The *Jurassic Fauna* had almost entirely disappeared; and the *Cidaris pustulifera*, a large species of *Echinus*, with thick, massive spines, from two to three inches long, the *Crassatella*, *Fellina*, *Orbicula (?)*, and *Ostrea*, found a fitting home along the altering shores.

The deposits formed in these ancient lagoons have now become the *Saliferous strata*, from which the salt of the Bethelsdorp and Government pans is derived.

The water contained in these lagoons being cut off from the sea by a sand bar or other barrier, or only having occasional communication with it, evaporated more rapidly than the limited inflowing could replenish. By this means the portions left would become more intensely salt than the outer sea itself, and thus the deposits that accumulated in them would also become highly impregnated with saline matter; which would again, as the rocks became more upheaved, be re-dissolved as the rain water permeated through them,

and be carried in solution into the waters of the pan, where evaporation again doing its work would re-precipitate it from the over saturated fluid in a crystalline form at the bottom. This appears to be the true explanation of this valuable supply of salt, that in the earlier days gave rise to a number of rather strange and amusing theories.

At the close of the period of the lagoons mentioned in the last paper, another gradual elevation of the coast took place; and again the Uitenhage rocks, slowly emerging from the sea, remained dry land for another enormous cycle of years, thus preventing the formation of any considerable series of deposits to mark the progress of the intervening time. This has caused another great break in the history of life in this part of the world, from the close of the *Upper Jurassic* until the approach of the *Pliocene age* of the Southern Hemisphere. It is to be hoped, however, that more extended examination may discover some of the missing links, although we cannot at present trace the various stages of the fauna and flora that occupied the old continent during that vast period, great vicissitudes of climate must have occurred, quite as marvellous as those we have described in the Northern Hemisphere; thus as the deposition of the great Lacustrine formation was drawing to a close, the moderation of the climate seems to be indicated by the wide-spread cone-bearing forests, and the absence of any palm-like forms, &c. It was, however, during the *Upper Karoo period* that large extents of country must have been covered with a dense swamp-loving vegetation which laid the foundation of the coal beds of South Africa.

In this country these last differ from those of Europe by being associated with fresh water deposits instead of marine. Notwithstanding this they must form, judging from the numerous and widely extended outcrops of this valuable mineral, an important member of the Karoo formations.

Before proceeding, I cannot help remarking upon this subject that it seems almost surprising that an inquiry of such vital importance as that of the real extent of our coal deposits has been so long neglected, especially in a country so devoid of trees as many portions of this are, and where we have vast inland territories without a single navigable river.

The importance of this, at the present moment, cannot be over-rated; for every sensible, thinking man *must* see, that with a rapid increase of population—a population that is constantly pushing on further from the seaboard into the interior, that "the age of the wagon" is fast passing away; and that if the new centres of industry are to be supplied with even the necessaries of life, other means for their conveyance, both cheaper and more expeditious, must be obtained. If, therefore, we are ever to attain any lasting degree of eminence, and to hold our own in the great race of nations, the want of large navigable rivers will have to be com-

pensated for by the gradual introduction of an extensive system of railways.

But to make this successful, or even possible, it will be necessary that a proper supply of fuel can be obtained *in the country* itself. Without this, railways can never be worked economically, and therefore can never prove successful; hence the vital importance, as I have said, of an accurate knowledge of our supplies of coal.

Depend upon it, *at the present moment* this is of far more importance to the ensurance of our *permanent* prosperity than even the discovery of either diamond or gold-fields. The latter, by drawing large masses of population without increasing our means of supplying their wants, but increases our difficulties; while a favourable solution of the problem stated will decide whether we shall remain a weak and scattered community, with spasmodic fits of vitality and long intervals of stagnation, or whether we are to be the founders of such a power as South Africa from her geographical position and her undeveloped, and at present almost unknown, resources entitle her to become.

Continuing our investigation of the changes that followed the accumulation and covering the dense vegetation of the *Karoo coal beds*, we find all traces of the great forests that had flourished for so long a period gradually disappearing, until the old continent appears to have been deprived of its ancient forest covering. This was evidently brought about by such an alteration in its physical conditions that it not only completely destroyed the flora that then grew, but prevented its return.

There can be no doubt but that it was during the period when these conditions existed that a gradual elevation (not irregular or local, but of the entire area) of the great central lacustrine region commenced. The main lines of drainage, however, still seem to have been (even after the central portions had become so raised that the last vestiges of the great lakes had disappeared) towards the south; most probably into the present basins of the Great Fish and Sundays Rivers. This is clearly evinced by the erosion of the line of *Panne veldt* that crosses the Orange River of to-day nearly at right angles, and can be traced to the Middelburg Division south of the mountain range that now forms the water-shed that separates the waters flowing into the Indian and Atlantic oceans respectively.

The upheaval of this central region continued during the time that the greatest portion of the denudation of the shale and sandstone deposits that had been formed within the area of the old lake basin occurred.

A corresponding oscillation and subsidence of many portions of the old continent itself seems to have accompanied this, altering the various levels of the country so much that the ancient rivers disappeared, leaving in some places only their dry channels to testify of their former existence; in others not only they but the very country through which they ran sank beneath the waters of the eastern ocean.

Thus was this depression continued on the one hand, with elevation and accompanying denudation on the other, until the sides of such mountain ranges as the Stormberg, the Sneuwberg, the Great Winterberg, and the Drakensberg were scarped out into something like their present shapes; until what were once the very deepest portions of our lacustrine system became converted into the highest ridges of our most lofty mountains.

It may be asked under what circumstances was this tremendous eroding out of mountain glens, valleys, and sloping flats, that look as if they themselves were the basins of ancient lakes that had been subsequently drained, brought about?

We have noticed the gradual lowering of the temperature, and the disappearance of the pine forests; but the peculiar *doming* and rounding off of the rocks themselves, the vast accumulations of *unstratified* boulder drift spread over many parts of the country, the *enormous erratic boulders* scattered over other portions in positions where water alone could never have placed them,—evidences that are looked upon as conclusive in the Northern Hemisphere, and which one is led to believe must be equally so in this country,—point to the existence at the time of their occurrence of an extreme antarctic climate, when the whole country was covered with a tremendous capping of land ice, grinding down and moulding the old lacustrine rocks during the process of elevation, leaving their denuded flanks to form the sides of future mountain chains. This finally turned the current of the old southern lines of drainage towards the west; but before the valleys of the Orange and Vaal were cut out as we now find them, their course also was occupied by a chain of large lakes, connected apparently the one with the other. As the waters of these gradually cut their way through the barriers that formed them, a gradual amelioration of climate took place, and the eternal winter began to relax its hold, while the rivers eroded their present channels; but even then, however, there was a period when the climate was sufficiently severe to allow river-ice to lay down large accumulations of diamantiferous boulder drift along the ancient banks.

Judging from the *Pliocene* formations yet to be described, South Africa must have most probably possessed this wonderful appearance of antarctic snow and ice at a time when palm trees grew near the London Basin and rejoiced under a tropical sun, when strange crocodiles and pythons lurked upon its river banks; while still further north Greenland was clothed in all the verdant glories of a temperate climate.

Our *last* glacial period was therefore vastly anterior to that of the northern hemisphere, and this is the reason why so many of the evidences of ice-action have become obscured or worn away; as the rocks that were the most exposed to it have been during the whole of that vast period of time subjected to atmospheric influences. But the great break in the succession of animal life eloquently points to those conditions that would have been adverse to its development.

Whilst the climate of England was gradually changing from a tropical to a temperate,—from a temperate to a cold, and finally to an arctic one,—a corresponding change was also taking place here, but in the reverse direction.

During the time that these last changes were taking place there was again a subsidence of the Uitenhage rocks, but on this occasion not quite to such an extent as to form an estuary of the dimensions of the old *Jurassic period*; but still sufficiently great to allow an arm of the sea to reach from the hills east of the Sundays River to those of Port Elizabeth, extending inland for many miles. When this great inlet had reached its greatest expansion, such a change had taken place in the temperature of this part of the world that at the time of the extreme climate of the English *Newer Pliocene* and *Post-Pliocene* eras, when shoals of large cetaceans floundered in the icy seas of Britain, South Africa possessed seas that were sufficiently tropical to allow the large *Venericardiæ*, *Pectunculus*, and other kindred shells that are now found only in the warm latitudes of Zanzibar, to flourish in their waters. Since this time, as in Europe, since the last *Northern Glacial Epoch*, there has been a gradual amelioration of climate; so here in South Africa there has been a gradual cooling, and it is this very cooling that has, doubtless, again caused a corresponding migration of marine life in a northerly direction, although at that time the coast line was much more indented than it is at present; still the great southern continent stretching to the eastward must have disappeared, and the south-east and eastern coast must have taken their present general outline, thus allowing the descendants of the mollusca of tropical Port Elizabeth a means of *migrating* without obstruction as the temperature of the south moderated to more congenial regions.

But even looking at this last great change alone, what an enormous period of unknown centuries must have elapsed since the old fossil *tropical* shells of the Zwartkops and Amsterdam flats limestone were the living inhabitants of the *Pliocene* seas. The site of the town of Uitenhage has again since that time emerged out of the waters of the sea; the wide valleys of the Zwartkops and Sundays Rivers have been eroded, and their separated valleys, together with that of the Koega, have formed bays that were almost land-locked (very similar to portions of the present Australian coast), where the beautiful *Akera*, the great *Panopæa*, the large *Cardium*, the ridged *Tapes* abounded, together with multitudes of *Cerithii* and other shells, now found only much further to the eastward. Since the *Post-Pliocene* shells have in their turn migrated further to the north-east, several minor osciliations of the land have taken place. This is evidenced by the traces of ancient coast lines, and whose contents tell us that when these most recent movements took place the climate had become very similar to that which we at present possess.

These *Upper Post-Pliocene* and *recent* deposits contain also other evidences of great interest, as it is in them that as far as scientific

research has at present carried us, we find the first traces of the primitive races of man in this country; and to our astonishment we find at the same time that he must have been in the same stage of existence (in comparison to our civilization), with identically the same stone implements and weapons, the same kind of ornaments, the same style of carvings of the wild animals they followed in the chase as the *Mammoth cave men* of Europe.

South Africa, even to the present moment, has preserved her race of cave-dwellers,—a race of primitive men apparently of the very same type as that of the most ancient race yet discovered,—a race whose history, when it is written and better understood, will furnish many of the connecting links that will join the men of the old mammoth world to that of the new. These wonderful little people, although now fast becoming extinct, have survived until our day all the revolutions through which the world since then has passed; but in striving to solve their history we shall doubtless learn much of our own.

Having thus attempted in a rapid survey to give some idea of the astonishing changes that our part of the world has gone through, I will merely notice, in conclusion, some of the most important teachings imparted to us by "The Study of Geology." The first of these is the wonderful *succession of life* upon the earth,—a succession that even in the present imperfect state of our knowledge goes far to point to a progressive development.

The earliest signs of life yet discovered, as we have seen, are in the *Foraminifera*, then low types of marine life; then *Crustaceans*, then approaching the Crustaceans on the one hand, *armour covered fish* with reptilian teeth and paddle fins on the other; showing as they do combined modifications, and an advancing development of organization; then the great fish lizard with its enormous paddles; and huge terrestrial reptiles; and low typed *Marsupials* and marine *Mammals* that remind us of those of the more ancient *Icthyosaurus*. Again we find the paddle of one reptile developed into the membranous extremity of the *Pterodactyle;* the terrestrial *Dinosaur* with an articulated foot like the wonderful bipeds of the *Lias;* the descendants of animals with originally combined characteristics, gradually diverging more widely from each other, until in the one direction the reptilian form had arrived at the *Python;* while in the other the development of life had taken the shape of that old dweller of the woods with its man-like teeth, which so nearly approached the most primitive races of men that Professor Huxley has declared that the anatomical divergence between highest anthropoid ape and the lowest type of man *is much less* than that between the lowest man and the highest Caucasian. This seems startling to those who have not before thought on the subject.

Thus with regard to the history of life on the earth, science seems to teach us that in the Divine mind there was no need of after thoughts—no need of experimental or successive creations,—but

that there was one grand stream of vitality, that issuing from the beginning from that glorious First Great Cause, has continued its onward progress from then until it has reached ourselves!

Another great truth that "The Study of Geology" teaches us is the enormous duration of the various geological periods; but this is a subject beyond the powers of finite man to grasp. Just as when we speak of millions and millions of miles with regard to space, so is it when we speak of the millions and millions of years that must have elapsed since the *Eozoon Canadnse* lived in the primæval ocean. In both cases we have merely a vague idea of something incalculably great. Astronomers in future generations may throw some light upon this subject, when the motion of the sun is more correctly ascertained.

As the earth with its satellite makes its annual revolution round the sun, so we are told that the sun with its accompanying train of worlds is sweeping through space round some central spot near Alcyone; and that it will take some 180 millions of years to complete a single circle. If the observations of future generations verify this, then will this length of time be the duration of one solar year. Under such circumstances we cannot imagine that a sun like ours would be called into existence to pass through but a portion of this vast circle, or merely to complete a single revolution, but rather multitudes of them.

Here, then, would be the time that many geologists require when they say "Give but sufficient *time*, and the present causes now in operation on the earth will fully account, without the aid of convulsions or catastrophes, for all the wonderful phenomena that have taken place on the face of it." Thus will geology teach us not only the succession of life upon the earth, but "the March of Time" moving onward sublimely for countless ages, and thus displaying to us the wonderful unity, perfection, and permanence of the works of GOD. It tells us of sunshine beaming on the earth from unknown time; of gathering clouds, of storms, of gentle passing showers that lit up the heavens with the beauteous bow; of rolling surf thundering upon outer coral reefs, and placid, rippling waves and tides murmuring along the sands in sheltered bays.

It tells of the sea stealing over the land at so slow a rate that the life of a man in comparison would be scarcely an infinitesimal fraction,—but yet so surely that continents became islands, and islands seas; or again retreating, palm trees waved upon the emerging lands, that equally, slowly, and majestically arose from the surrounding waves, until snow-capped mountains occupied spots over which the currents of the mighty deep once flowed.

Again, "The Study of Geology" imparts other grand truths besides these. It proves to us the vast "antiquity of man." It shows us that a wild hunter race, dwellers in caves, were co-temporary with the colossal *Mammoth* and his giant associates,—that he followed the chase at a time when Britain as an island did not exist, but was a portion of the old mainland. From that time until

now his footsteps are traced through all the various formations. But how great must have been the period that has intervened!

The glories of ancient Egypt, with her temple palaces, are said to have existed some three thousand years; but the geography of the country remains the same, and the inundations of the same old Nile still fertilize the banks upon which these temples stand; but the Mammoth has disappeared from the face of the earth, and in the north of Europe *successive* zones of forests have grown up, and died, and been entombed. The very *contour* of Europe has altered; some of its peninsulas have become islands, separated by broad channels of deep seas since man first roamed across its plains. How thankful ought not we of the nineteenth century to be for GOD's good providence that He has given us faculties that enables us to "read, mark, learn, and inwardly digest" those things that will lead us from darkness to the light of the noonday.

Last of all, "The Study of Geology" brings before us the solemn subject of Death. It tells us that death was ordained from the beginning by Divine wisdom as a natural sequence to life; and that though the individual passed away, the living stream continued. The *Eozoon* lived and died; the *Mollusk* and the *Crustacean* obeyed the same great law. The tiniest insect and most gigantic reptile, the great *Mammoth* and the most complex *Anthropoid* form were subject to it.

It was not that they grew up and sank merely from the natural decay of age. Death, in every shape, was present there; as it is even in our day. The young died as well as the aged; there were deaths by violence and deaths by disease,—none escaped, and the same end came upon all.

Paradoxical as it may seem it is death that secures the permanence of life. The sick, the weak, and the aged, are taken in the struggle for existence; the strong and vigorous are left. The weaker races succumb to the more powerful, and the lower organized to those higher in the scale of formation. This from the beginning has been the will of the All Merciful; and man, in his turn, has been amenable to the same eternal law.

Studied in the proper spirit, "the great Stone Book of Nature" becomes to us a sacred volume above all price, speaking with a voice omnipotent to finite men like ourselves; and showing us that what we call "Time" is but that portion of Eternity in which we live, without beginning or end, the immeasurable past and the immeasurable future lost in the unknown and unknowable.

Let us not shrink, however, from the mission that has been allotted us; feeling certain that the student of nature may press forward with a firm conviction that while he trusts to higher wisdom than his own, every onward step he takes must lead him nearer to truth and to GOD.

ERRATUM.—In part II., folio 172, nine lines from the bottom, there is the following misprint, viz.:—"All that we positively know is, that *some* of these operations of nature took place suddenly." It should be, *none*.—G. W. S.

Phosphorescence of Minerals.

By Dr. P. Daniel Hahn.*

It may truly be said that the word "Phosphorescence" is oftener used than understood. Phosphorescence is the property of inorganic or dead organic matter to give out light, when the substance has been exposed to the influence of any kind of light, or of a light produced by mechanical operations, and differs from glowing by its inferior intensity of heat, and from burning by the absence of any chemical change in the substance employed. The means of demonstrating Phosphorescence in substances are :—

1. Heat - - - - - -
2. Electricity - - - - - I. Movement of Molecules.
3. Light - - - - - - -
4. Various Friction - - II. Movement of Mass.

We thus arrive at a division of the different appearances of light, which are known as Phosphorescence.

In times past, omitting the fabulous tales about the carbuncle, and other stones of the ancients (*vide* "Claudius Aelianus, de Natura animalium," Lib. VIII., cap. 22), the phosphorescence of the diamond was observed earliest. The alchymist, Albertus Magnus, in the 13th century, relates that he had seen a diamond which appeared to glow in warm water. After this story of Albertus Magnus, comes the notice of the Bononian stone, "Spongia solis," consisting of a mixture of ground heavy spar, the white of an egg, and gum tragacanth. The discoverer was a shoemaker, Vincenzio Cascariolo, of Bologna, about 1602. In the same century another stone, with similar properties, was prepared by the Saxon Baldwin, who, when searching by alchymy for "the spirit of the world," obtained instead, by accident, a stone which, when heated, gave out light. This stone, in its composition, is not very unlike the Bononian stone.

The word phosphorescence first came into general use after the discovery of phosphorus by Brandt, in 1674. Since then many kinds of "spongia solis" have been prepared, but we have no space to notice them here. We must return to the consideration of our subject.

The well-known Robert Boyle, who has been called the "Father of Chemistry," found that the diamond gives out light when heated

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by sun-light, by fire, or by contact with any warm body. The results of his own, and of Dr. Wall's investigations may be found in the Philosophical Transactions of the year 1708. Du Fay, and J. H. Pott in the last century, continued investigations in this department of physics, but we can readily perceive that their interpretations of these appearances were imperfect, as might be expected from the state of chemistry and physics at that time. More remarkable are the treatises by Wilson, "A series of experiments relating to phosphoric and prismatic colours," first ed. 1755; second ed. 1775: and the investigations of Wedgewood (Philos. Trans., 1792.) We omit Lavoisier, J. P. Macquer, P. S. Pallas (Mémoires de St. Petersbourg, 1783); Th. von Grotthuss (Schweigger's Journal, Bd. 14, 15, 25, 27); G. Osann, J. Schneider, etc., etc., whose labours cannot be noticed in such a short review. There are two, however, Placidus Heinrich, 1811, and Sir David Brewster, 1820, whose exact and extended investigations on the phosphorescence of minerals may be considered as the principal source of our knowledge on this subject.

Having examined the several kinds of minerals with regard to their phosphoresence as produced by heat, the author of this treatise will afterwards give the results of his own investigations, and the physical explanation of these appearances of light. We shall give now a short outline of the general results of our observations on the three other kinds of phosphorescence: —

(*a*). Phosphorescence produced by Light.
(*b*). Phosphorescence produced by Electricity.
(*c*). Phosphorescence produced by various friction.

(*a*). Phosphorescence produced by light is seen when certain substances for a longer or shorter time emit light in darkness, when they have been exposed to sunlight or any other kind of light, that is :—the molecular vibrations of a substance continue without receiving impulses of new light-waves. The majority of inorganic substances, but not all, as was erroneously supposed by Du Fay and J. W. Draper, possess this property, for which reason Leslie and Placidus Heinrich supposed that the light of the planets and the moon is produced only partially by the reflection of sunlight, and partially by phosphorescence produced by light.

But what kinds of light can produce phosphorescence? Sunlight was generally used in these experiments, but as yet no relation has been established between the time of exposure to light and the duration of the resulting phosphorescence, because this varies very much in different kinds of minerals, and even in different specimens of the same mineral. Sunlight produces phosphorescence in the diamond, when that mineral has been covered with paper, white leather, tin-foil, the finger, water, oil, or other clear fluid. Some minerals lose the property of giving out light, when put in the focus of a strong lens. Daylight, even moonlight, and candlelight, as

well as the magnesium light, can produce this appearance in certain substances. Becquerel shows that the electric light has the same effect as sunlight in producing phosphorescence. Experiments have also been made on the power of the prismatic colours to produce phosphorescence. The violet rays (according to Matteuci and Becquerel), and the blue (according to von Grotthuss) have the greatest power; the other colours produce either a smaller amount of phosphorescence or none at all. Even the red light collected by a lens destroys at once the phosphorescence produced by sunlight, as was shown by Wilson, Ritter, and Seebeck.

We cannot omit to notice the very interesting relation which exists between the phosphorescence produced by light and that produced by heat. If the phosphorescence of a diamond, or of a chlorophane be nearly extinguished by darkness, the heat of the hand or the breath is sufficient to excite it again, provided that the minerals have been previously exposed to sunlight.

Minerals and other natural substances give out only white light (according to Pl. Heinrich), whereas the phosphorescence of the different "Bononian" stones exhibits very various colours. The stones consisting of oxide of tin and antimony show a white colour; of arsenic and barium, red; of cadmium, yellow; oxide of zinc, sulphide of antimony, mercury, and strontium, green; of sulphide of arsenic, blue.

As above mentioned, the majority of inorganic substances exhibit a phosphorescence produced by light, but there are a great number of organic substances which also possess (according to Pl. Heinrich) the same property, such as paper, India rubber, loaf-sugar, white wax, leather, ivory, bones of fishes, cotton, kernel of cocoa-nut, old sugar-cane, linen, dry plants, cheese, the yoke of a hard-boiled egg, pearls, the stones found in the bladder of men and animals, teeth and bones of animals, &c. But we shall now return to our subject—the phosphorescence of minerals. With regard to their classification, it may be mentioned that we use that of Dana as being a well-known one, and because the researches on this subject have not yet given results sufficient for a special distinctive classification.

Class I. *Gases.*—Gases do not exhibit the phosphorescence produced by light.

Class II. *Water.*—Water has no phosphorescence. Pure ice shows slight phosphorescence. It is observed by Ghafe that snow has a bright phosphorescence. (Bulletin de l'Acad. Roye de Belg. XXIII, 250).

Class III. *Carbon.*—The phosphorescence of the diamond is well-known; it shows this property also when it is put in hydrogen, carbonic acid, &c. The other minerals of this class may be omitted.

Class IV. *Sulphur.*—No phosphorescence.

Class V. *Haloid Minerals.*—Glauber's salt, common salt, borax, all carbonates, alum, have (according to Pl. Heinrich) a phosphorescence like that of the fluor spar. The sulphates need not be con-

sidered. Fluor spar, and especially the variety chlorophane (from Derbyshire), is the most remarkable mineral as regards phosphorescence. The sensibility of chlorophane is so great that it gives out light for ten hours, when it has been exposed to the light of a candle for two minutes. When it has been exposed to sunlight for fifteen minutes, it gives out light for ten days, and the heat of the hand is sufficient to produce light in it for twenty-four days after exposure to sunlight. The other kinds of fluor spar also possess phosphorescence, but in a low degree.

Class VI. *Earthy Minerals.*—The Minerals of this class have not all been examined. With regard to phosphorescence, however, so far as is known, they do not exhibit it in any remarkable degree.

Class VII. *Metals and Metallic Ores.*—These show very little phosphorescence.

(*b*). Phosphorescence produced by electricity. This phosphorescence appears in certain substances when an electric spark is transmitted through them ; when the substance is merely exposed to the electric light, then we have the above-mentioned phosphorescence produced by light.

We omit the researches of Professors Wheatstone and Becquerel on the identity of the electric light, and that which is known as phosphorescence. The results of all investigations on this subject, those of Pl. Heinrich, Brewster, Pearsall, Dessaignes, &c., are, that electricity is related in three ways to phosphorescence. First : Certain substances give out light, when electricity is transmitted through them (true phosphorescence produced by electricity.) Second : Certain substances whose power of giving out light when heated, is destroyed by too strong heat, recover that power when electricity is transmitted through them. Third : Certain substances, which have not naturally the property of phosphorescence produced by light or heat, receive this power by being electrified, while other substances, which have only a small amount of this kind of phosphorescence receive a greater amount when electrified. Though there have been many investigations made and many treatises written upon the phosphorescence produced by electricity, yet our knowledge of the subject is limited. With regard to minerals we know almost nothing as to the phosphorescence produced in them by electricity.

(*c*). The Phosphorescence produced by friction of various kinds. This term is used to denote the different movements of mass (such as are produced by rubbing, striking, scratching, breaking, pressing), which can give in the substance employed those molecular vibrations known as visible undulations of light. In most experiments made to produce phosphorescence, two pieces of the same substance were employed. Substances, whose surfaces are naturally smooth or artificially polished, will never exhibit phosphorescence when thus treated ;—the substances used must have an uneven surface and a crystalline structure in order to exhibit it, since the light is pro-

duced by the breaking of very small particles of the substance employed. It will be perceived, therefore, that phosphorescence, whether produced by rubbing, or breaking, or scratching, is quite the same. Further, we find, according to the molecular theory, that this light is produced by electricity becoming free, when the molecules are separated from one another. A very fine example of this may be seen when mica is cleft—a line of light denotes the point of separation. The phosphorescence produced by rubbing is quite different from that produced by heat, as is shown by Dessaignes, Hawksbee, Wedgewood, Davy, and Heinrich, who have proved that these experiments can also be made in a vacuum, chlorine gas, nitrogen trioxide, water, oil, &c. All haloid salts and earthy minerals of a certain hardness and crystalline structure exhibit phosphorescence when rubbed; quartz, feldspar, heavy spar, and some kinds of augite, are remarkable in this way, as also blende. The daily observed phosphorescence of loaf-sugar and sugar-candy belongs to this class. Dessaignes found that the diamond was the only mineral which emits light when brushed. Thenard observed that gases show a bright phosphorescence when suddenly condensed or rarefied ("Annales de Chimie et de Physique," T. XLIV.) Much more might be said on this subject, but I fear to tire my readers with mere enumeration of facts, the results of all experiments hitherto made.

(*d*). Phosphorescence produced by Heat.—When phosphorescence was first observed, its appearance was explained by the supposition that the substance sucked up light, which was afterwards emitted, for which reason the respective substances were called "spongia solis," "spongia lucis," "magnes luminans," "lucifer" "lapis illuminabili," etc. This comparison of the self-luminous substances with a sponge was defended by Lemery, 1709; but his explanation is quite at variance with many observed facts. Another explanation is that of Du Fay, who considered all phosphorescence as a combustion, taking place on the surface of the substance employed. The discharge of light, however, does not take place on the surface alone, but throughout the substance, as may be seen when small crystals of anhydrite are heated. When the undulating theory of light, as established by Huyghens and Euler, became generally recognised through the investigations of Young, Fresnel, and Frauenhofer, the natural philosophers were compelled to explain these appearances in accordance with the new theory. This was attempted by Pl. Heinrich and Dessaignes, but in such a way that their explanation was a mixture of the theories of Newton and Huyghens.

But what is the explanation of phosphorescence according to the present state of physical knowledge?—We shall consider here the phosphorescence produced by heat. The analogies between light and heat (such as reflection, simple and double refraction, interference, and polarisation) prove that in both the appearance is due not only to the same, or, at least, to a similar kind ofmovement, but also, that the moved medium is the same, that is:—t e rays of light

and the rays of heat are produced by the vibration of the same ether, and differ from each other only by the length of the undulation. The rays of a moderate heat cannot affect our organ of seeing on account of their length, but by increasing the heat the length decreases, and the optic nerve becomes affected. The explanation of the development of heat in some chemical processes must be here omitted. When a substance is heated, the undulations of the heating medium (in this case a plate of metal, on which the substance is placed) communicate themselves to the respective substances and produce in them ether-undulations of the same length; if the undulations of the heating medium are so short as to affect the eye, the undulations of the substance will also in a short time do the same, that is, the medium as well as the substance are glowing. *But there are certain substances, which, when placed on a heated plate, having undulations which do not affect the eye, being of too great length, are yet able to produce other undulations, which do affect the eye;* that is, longer undulations of the medium produce smaller undulations in these substances, which are called self-luminous. The influence of cohesion, which limits to some extent free vibration of the ether in the substance, is counteracted by an increase of temperature.—It is known that solid substances glow at a temperature of 500 deg. C. to 600 deg. C., and, therefore, a true phosphorescence, which differs from glowing, is seen at a lower temperature.

According to the above explanation, we may expect that there are different colours to be seen, and that they follow each other from red to violet, when the temperature is increased. The results of not less than 2,500 experiments made by the author of this treatise, on the phosphorescence of minerals, proves it. The meaning of this, however, is not that a self-luminous substance gives out first red light, and then orange, yellow, green, blue, violet, when more strongly heated, but that when a self-luminous substance gives out light of different colours, the colour whose undulations of light are longer, is seen first. For instance, if the phosphorescence of a substance be blue, red, or green, we shall see first red, next green, and then blue when the substance is more strongly heated.

In different self-luminous minerals, the same colour may be seen at different temperatures, since this depends upon the chemical composition and physical structure (such as cleavage and crystalline form) of the minerals employed. The temperature at which minerals begin to emit light, is from 30 deg. C. to 240 deg. C.; common feldspar (orthoclase) is the most sensitive mineral. I found that the powdered mineral gave out light, though only to a slight extent, when heated by the warm hand.

The duration of this kind of phosphorescence generally depends on the duration of the temperature of the mineral, and we can easily see that a larger piece gives out light for a longer time than a smaller one.

But if we use in these experiments too strong a heat, the power

of giving out light becomes completely lost in all minerals, that is the intensity of heat destroys or changes that physical structure of molecules, by which longer undulations of the heating medium produce smaller (and therefore visible) undulations in the substance. This change of physical structure is especially remarkable in those minerals which lose water, when heated; such as a good many haloid salts, several zeolites, and other minerals, whose cleavage is more perfect after the application of heat. With the exception of the former minerals, the lost power of discharging light can be restored in all minerals, whose chemical composition is not changed by electricity, as above mentioned: that is, electricity produces in the substances employed those physical arrangemenrs of molecules, which are able to change longer ether-undulations into shorter ones.

The definition of phosphorescence given in the beginning of this treatise, excludes all appearances of light, which are produced by a chemical change of the substance employed; therefore, the light which is seen when minerals consisting of metals with sulphur, arsenic, and antimony are heated, cannot be considered as phosphorescence produced by heat, since a chemical change takes place.

We omit a large number of other substances, which also possess the property of emitting light when heated.

But before we give a list of the self-luminous minerals, we ought to consider shortly, how experiments on this kind of phosphorescence are conducted. Since the intensity of the light discharged is very small, (*i.e*, according to the exact investigation of Draper, chlorophane gives out light three thousand times less in amount than a very small oil lamp) the experiments must be made very carefully. The means by which Du Fay and von Grotthuss made their observations, were more comical than practical. It is of the utmost importance that the experiments should be conducted in absolute darkness, and that the observer remain in such a darkened room for at least twenty minutes, to enable the eye to recognize a very small amount of light. The minerals to be observed, are laid on a plate of platinum, which is placed over an opening in a square tin-box, having a gas-lamp (Berzelin's lamp) burning inside below the opening.

According to Draper, platinum glows at a temperature of 525 deg. C.; therefore, all appearances of light seen in the minerals below this temperature are to be considered as phosphorescence, produced by heat. If we want to observe the temperature at which phosphorescence is exhibited, minerals must be heated in a liquid, or on a sand-bath, in which the thermometer may be placed. As soon as any phosphorescence is seen, we ascertain the temperature by striking a match. I have not space to explain the various modifications of observation, but hope that the above outline will be sufficient.

The results of my investigations are:—

1. Minerals which exhibit *no* phosphorescence, when heated: gases; water; all kinds of mineral coal, graphite, bitumen; sulphur;

sal ammoniac, nitre, washing soda, common salt, alum stone; all kinds of opal, talc, nephrite, pennine, pyrophyllite, pyroxene, chrysolite, allophane, pinite, lapis-lazuri; pyrochlore yttrotantalite, lievrite, allanite, rutile, anatase, brookite, tin ore, molybdenite, the ores of bismuth, antimony, arsenic, uranium, iron (with the exception of spathose iron), manganese, chromium, nickel cobalt, zinc, lead, mercury, copper, and the precious metals.

2. Minerals possessing a phosphorescence of greater or less degree, which disappears sooner or later, when the heat employed is too strong. If the heat be suddenly removed, while phosphorescence is being exhibited, it disappears either at once, or in two or three minutes. Sometimes the colour of the phosphorescence of these minerals has been observed, as we shall mention below:—

The names of the Minerals are: Amber; heavy spar (yellow), witherite, celestine (blue), strontianite (yellow), gypsum (yellowish green), calcite (yellow and green), dolomite, fibrous magnesite (yellowish green and blue), brucite, wavellite, turkois; chlorite (blue), serpentine, meerschaum (yellow), clintonite, actinolite, asbestos, spodumene, chondrodite (yellow), henlandite, stilbite, apophyllite, laumonite, thompsonite, analcime, chabasite, prehnite, corumdum, kyanite, andalusite, staurodite, leucite, albite, labradorite, nepheline, petalite (yellow and blue), epidote, idocrase, tourmaline, axinite, dichroite, mica, sodalite (yellow and blue), beryl, chrysoberyl, zircon (either a green phosphorescence, or none); spathose iron.

3. Minerals, exhibiting phosphorescence, worthy of special mention:—

Diamond.—The experiments show that the diamond emits light when heated, if it has been previously exposed to the influence of the sunlight.

Anhydrite.—The phosphorescence of this mineral is of a very bright green colour, which disappears, when it is heated strongly, or for a long time. We can observe in small crystals, that the amount of light is less in the direction of the long axis, where there is greatest cohesion, than elsewhere.

Aragonite.—The phosphorescence of the aragonite is brighter, and lasts longer, than that of calcite, with which it agrees in chemical composition, but not in physical structure.

Apatite, in all its varieties, shows a bright green phosphorescence, continuing from three to four minutes, after the heat is removed.

Fluor-spar.—Chlorophane shows light at a temperature of 50 to 60 deg. C.; a green colour is seen at 110 deg.; at 130 deg. C. to 135 deg. C., the colour becomes bright blue, and soon a deep blue. When heated up to 200 deg., all light seems to disappear, but suddenly a wonderful shining white light appears for a minute; then is seen again the blue colour, which only disappears when the mineral is very strongly heated. The other varieries of fluor-spar also show a green, blue and violet-coloured phosphorescence, but not to the same degree.

Baracite.—The crystals of this mineral allow us to see a kind of sparkling light, proceeding from the outside towards the centre on heating or cooling.

Quartz and Chalcedony.—The two conditions of the dimorphic silicic acid, quartz, and chalcedony differ through their phosphorescence. Quartz in its varieties always shows a phosphorescence, sometimes only a slight one, but chalcedony has no phosphorescence at all.

Tabular Spar.—The phosphorescence of this mineral is produced by a small amount of heat, and is of a green and subsequently blue colour, which is seen three or four minutes after the withdrawal of the heat.

Datholite.—The colours seen in this mineral, when heated, were bright blue and violet; they disappeared soon, when the mineral was more strongly heated.

Spinel.—The yellow varieties of this mineral show a blue and violet phosphorescence; the blue spinels, however, a yellow colour; all the other varieties of this mineral have no phosphorescence.

Mesotype.—A specimen from Iceland showed a very peculiar phosphorescence. When heated it shows only a very small amount of phosphorescence, but afterwards, by removing the heat, when I breathed on it, there was a beautiful sparkling light seen in every portion of the mineral employed. It was very difficult to destroy this peculiar property by a strong heat.

Harmotome.—A temperature of 90 deg. produces in this minera a beautiful red colour, which changes into a yellow colour by a stronger heat.

Orthoclase.—All the varieties of this mineral were very sensitive; the colours, however, were different in different specimens; red and yellow colours were seen, as well as green and blue. A strong heat destroyed all this property.

Scapolite.—Only some specimens of this mineral, whose cleavage was perfect, exhibited a red, yellow, and green phosphorescence; the other varieties gave out a yellow and green colour only.

Garnet.—With the exception of the yellow varieties, whose phosphorescence is of a yellow and green colour, no phosphorescence could be produced in the different kinds of garnet.

Topaz.—The beautiful transparent specimens from the Brazils exhibit a yellow and blue phosphorescence; all other varieties of this mineral show a green and blue colour. Its phosphorescence is the most perfect of all the minerals, which are called gems.

I have only given a short outline of the subject, in order not to fatigue the attention of my readers. A mere list of minerals, which have this or that property, will never give pleasure to any but mineralogists, and to them I have devoted the second part of this paper. Nevertheless, I venture to hope, that others besides will be attracted to the first part of this paper, and that they will be interested in hearing something of this little understood subject.

Cape Town Revisited.

Be Yarrow's Stream unseen, unknown—it must, or we shall rue it—
We have a vision of our own—ah! why should we undo it?
The treasured dreams of time, long past, we'll keep them, winsome Marrow;
For when we're there, although 'tis fair, 'twill be another Yarrow.

—*Yarrow revisited.* 1803.

First Day.—In revisiting Cape Town, after an absence of many years, my feelings and those of the poet, whose fears of losing the enchanting dreams of the Yarrow water of his early years, were very different indeed. My recollections of Cape Town included a vivid remembrance of sundry bad smells, musquitoes, dust, south-easters, and many other minor annoyances, many of which I thought the march of modern improvement would have before this swept away; but they also comprised the remembrances of a warm-hearted, kind, hospitable troop of friends, whom it would, I considered, be pleasant to revisit, mingled with which were associations of a private and painful uature I need not dilate on. Landing again on your South African peninsula, there was no longer one fond familiar face whom I expected in past years to greet me. Many other old and valued friends also have passed away, and so, when I put my foot on shore, on the 20th of March last, I felt lonely, not having a winsome marrow in attendance, and a stranger to a degree, which I would not have done, perhaps, if it had been my first visit. However, putting sentiment apart, it is my intention in this article to merely chronicle the change I observed on the outward surface of things since I left the Cape in 1859.

My voyage out in the *Walmer Castle* was everything that could have been desired. The officers were kind, gentlemanlike, and attentive; the table excellent to a degree, probably inducing many to commit the mortal sin of gluttony; the weather splendid; while the presence of Sir G. Wolseley and his staff on board certainly added much to the interest of the voyage, without showing the smallest shade of formality or restraint on our daily proceedings. Everything went on most agreeably from the day we left Dartmouth (23rd February), including a short visit to Madeira, until the morning of the 20th March, when, at an early hour, we were safe at our moorings in the Cape Docks, without any apprehension of being kept on board, as in former days, for a day or two longer, by the impending south-easter. But I had better describe our first approach to our revisited Cabo de Boa Esperanza, from the midnight of the day before our entrance. About 1 a.m. the Cape peninsula, it being moonlight, was plainly visible, and when I went on deck, about three hours afterwards, a faint dawn of morning appeared in the east. Stretched along the whole mountain range, extending from the Cape of Good

Hope to Table Mountain, was a light belt of cloud, at an elevation of about 1,800 feet, which emitted forth at intervals of about two minutes the most beautiful coruscations of the softest and most noiseless lightning of all tints, the period of a few seconds being sufficient to flash it the entire length of the Cape peninsula. Over the distant mountains of Stellenbosch and Hottentots Holland similar lightning-charged clouds were also lying, and the effects were beautiful in the extreme. Approaching Table Bay thus, in the early dawn, with all the western horizon steeped in black clouds, I was not long in recognising one most important improvement in the excellent light-house on Robben Island, which, with its fellow flashing light on Green Point, makes the entrance to Table Bay as safe at all hours of the night as would the lamps in Fleet-street or the Strand to a wanderer in the London streets—a very great contrast indeed to what it was a few years ago, when the unhappy mariner, unacquainted with the geography of Table Bay had either to remain outside all night, or avoiding the Scylla of the Whale Rock, probably run his bark ashore on the Charybdis of Green or Mouille Point. So far the treasured dreams of times long passed were agreeably vanished, but far more so when daylight was fairly set in, and in an inconceivably short period the big ship *Walmer Castle* had effected her entrance with the greatest ease, and was safely moored in her berth along one of the quays of the new docks, when I had time to contemplate the, I must say, wonderful improvement in the commercial capabilities of Table Bay since I had left it. Too much praise can hardly be bestowed on your dock works, creditable as they are both to engineer and executive officers. The difficulties surmounted must have been enormous, and the results most satisfactory, except in one point, which, however, is excusable, that they do not seem large enough, and that also the extension of the breakwater is still in an imperfect, and, I fear, rather a dangerous state, and ought to be vigorously proceeded with, as with a violent wind from certain points to the N.W. a heavy swell might set in, which would probably give the ships in dock some trouble. The quality of the stone, size of blocks, &c., got from the dock excavation appears admirably adapted for breakwater purposes, and the very steep angle of stratification in the clay slate appears to facilitate the excavation and removal of it

The patent slip, warehouses, &c., all appear constructed in a solid and substantial manner, and must afford immense advantages to Cape Town as a commercial port, threatened as it was with destruction by the opening of the Suez Canal. However, on passing through the dock gates a change came over the spirit of the scene, and it must be confessed that the view townwards was not at all an inviting one. A brown and dusty waste, made more uninviting by groups of rough sheds, an unfinished railway, and frowned over by that utterly useless and horribly ugly Fort of Amsterdam, which I had long ago supposed had been replaced by groups of warehouses

and merchants' stores. However, we must consider this as a question between the Colonial and Home Governments; and I well know the difficulties that intervene before the latter can be induced to give up a work of defence, however useless it may be. As we penetrate townwards, skirting the somewhat unsavoury localities of the Fish Market and its neighbourhood, I found that we might safely preserve our treasured dreams of the past, as far as dirty open drains and a rich variety of stenches were concerned; but a little further on I found signs of a visible improvement, in the shape of regular semi-circular stone gutters, with a pretty clean stream of water flowing through them, where the City Engineer

Bids kennels glide within their bounds, and heaps of dirt subside;

and, still further, an immense circular underground drain in progress of construction, big enough, one would think, to drain half the cities of London and Westminster. This looks like progress in the right direction; and lightly regarding the decaying anatomies of many crawfish, which encumbered the ground with their unsightly remains as in days of yore, I pressed on, and reached the Parade and Adderley-street, when I soon had ocular proof of the vast improvements which had taken place in street and shop architecture during the years I was absent. It looked at first to my eyes like a little City of Palaces, with here and there—not frequently, I am glad to say—one of the old Dutch houses, of the barbarous state prevalent before the conquest, intervening. I am not here going to enter into any particular criticism on the state of architecture of the buildings themselves; they are at least picturesque, rich looking, and the style or sort generally of modern Italian, not badly fitted for the climate, so far as the particular nature of our streets will allow. I found, also, the state of the paving and side gutters very satistactory. The hideous foul ditches of the Parade and Caledon-square filled up or crossed over, however, no longer a nuisance and disgrace, as they were formerly, to the town. Your new market-house, although by no means a picturesque building, appeared also a vast improvement, and I was greatly pleased to see the advanced state of cleanliness and salubrity of the Imhoff, and its once unsavoury and unwholesome surroundings. I looked in vain for the Capel ditch, but could find it nowhere; the foul "cunettes," along which formerly trickled a black stream of fœtid mud, thickened with carcases of dead puppies and kittens, was now a nicely formed channel, along which ran a stream of pure water. With the exception of the disfigurement it has received by the railway running through it, the state of the Castle was highly satisfactory, and even the curious old entrance gate, which was tottering to ruin when I left, exhibited the care which has been lately taken to restore it. In fact, so much improved has the state of our old Castle (your only mediæval relic) become, that I understand the old and often troublesome inhabitants, the musquitoes, have taken dudgeon, and are migrating from it in thou-

sands, seeking in the far west the more congenial regions of the fish market. It is to the care and energy of Col. Westmacott, the present Royal engineer, the inhabitants of the Castle and the surrounding regions (for all equally suffered) are indebted for the vastly improved sanitary state now existing. The passage of the railway through the Imhoff I always considered as a mistake, when an equally direct and much larger and open space existed on the south side of the Castle, on what is a nearly useless glacis, now, I see, used for the stowage of timber. In Caledon-square and the Main Barracks I saw but little change, except that the old unicorn over the Engineer's Office there has succumbed to the scythe of Father Time, and appears, like many other personages in the Public Works Department, to have lately lost his head; and even the lion has assumed a careworn and woe-begone aspect, as if the vast extent of work he has to go through was getting too much for him. Retracing my steps, and occasionally recognised by some old friend or other, I passed through several of the older streets, and everywhere found external evidence of improvement and prosperity in the increased cleanliness of the streets, the numerous well-stocked shops, and a general thriving and cheerful air of business favourably contrasting with the Cape Town as it was when I left it.

Here endeth my First Day.

H. H.

Concerning Proverbs.

HAVING spent not a few profitable half hours among those terse, sententious aphorisms, in which lie buried the wit and wisdom of many generations, we propose, in the belief that "the game is worth the candle," as the French say, to render a few remarks on proverbs, in the hope thereby to turn our readers' attention to a very curious and instructive department of literature. It is well known that the New Testament contains innumerable specimens of proverbial philosophy. The Epistles and Gospels are rich in brief, sagacious proverbs, nor did the apostles disdain to quote from heathen writers. "Evil communications corrupt good manners" is, for instance, from the Greek; and numerous other examples will readily occur to all who have given the subject investigation.

We have the high authority of Bacon for stating that the genius, wit, and spirit of a nation are enshrined in their proverbs; and he describes them elsewhere, in felicitous language, as the edge tools of speech. Dr. Johnson's definition of a proverb, as a short sentence frequently repeated by the people, may be deemed a trifle prosaic, but one does not look for flights of imagination in a dictionary. Old Howell's quaint remark that a proverb should contain sense, shortness, and salt, has all the merit of being strictly true; and to Earl Russell is attributed the masterly definition to the effect that a

proverb is the wit of one man and the wisdom of many. Bulwer Lytton, whose characters frequently revel in proverbs to an overwhelming extent, has assigned the palm to the Spanish tongue as essentially that of proverbs. "Every other sentence," he says, "is a proverb. In proverbs lovers woo, politicians argue, bargains are made with your landlady, and conferences held with your muleteer." Other authorities have awarded the preference to the language of Italy, and perhaps among modern European tongues it has the highest claim, but there can be little doubt that our proverbial sayings are mainly derived from the immortal literatures of Greece and Rome, and that many eastern tongues, especially the dialects of China and Hindostan, are rich in the same philosophy. For our part we have long been of opinion that the vast majority of proverbs are *common to all languages*. From whence originally derived, or to what extent they are common *ab initio*, and simultaneously as it were to various nations is a point of no slight interest, requiring research for which we have neither leisure nor ability. Our object on this occasion is rather to have a preliminary chat on proverbs without being profoundly deep or (we hope) profoundly dull.

In addition to the prose writers we have quoted, the poets have also given us their opinions on the nature and value of proverbs. "Omne epigramma sit instar apis: sit aculeus illi, sint sua mella, sit et corporis exiqui," is the apt description of Martial; and there is no more graceful definition than that of Tennyson, who styles proverbs "Jewels five words long, that on the stretch'd forefinger of all time sparkle for ever."

The classification of proverbs is a work of as much interest as difficulty. It was our fancy once to class them by languages,—Greek, Ancient Latin, Mediæval Latin, German, French, &c.; and, again, by separating general proverbs from those of special application, and by arranging them under appropriate heads such as love and matrimony, time, money, economy, &c. Classify as we would, the miscellaneous proverbs always formed the largest section, though a very considerable class of English proverbs were amusingly found to relate to fools, knaves, and beggars, so deeply rooted is our Anglo-Saxon contempt for the first and hatred for the second, and so keen and abiding is our national aversion to idleness and unthrift.

No compilation, however careful, will embrace a tithe of the proverbs that will occur to any man of average erudition. Similes, however sententious, must not be confounded with proverbs. They may for the most part be more properly described as proverbs without sense, or rather, in which the sense has long been lost by local corruptions or by mistranslation, until little is left but a form of words both arbitrary and meaningless. Yet reflection will tell us that even similes are in daily use by learned and unlearned alike, and "familiar in our mouths as household words;" thus clearly proving the want felt by mankind generally for what we may call the small change of speech,—terse, pithy expressions to convey the

maximum of meaning in the minimum of words. Familiar expressions, again, though not identical with similes, are hardly entitled to the dignity of proverbs, being more local in their nature. A *true* proverb, as we have said before, is common to most languages, and may often be traced from nation to nation in an extremely curious and instructive way. For instance, the simple one "Let well alone," is distinctly derivable from the French, and has its equivalent in the Latin recommendation, "Quieta non movere," and the "ne moveas camarinam;" the latter, by the bye, a literal translation from the more ancient Greek.

Our common warning against carrying coals to Newcastle has roots as old as the everlasting hills. "Indulgences to Rome" was the corresponding sarcasm of the middle ages; and long before those days it was a mark of superfluity to carry "Oil to the city of olives." The Latin expressions, "Poma Alcinoo dare," and "Infers piper in Hindustan," are but expressions of a similar thought; and even in Grecian times it was recognized as proverbially absurd to carry "Owls to Athens" or "Enchantments to Egypt."

Our homely proverb "Out of the fryingpan into the fire" finds a parallel in the "Incidit in Scyllam, cupiens vitare Charybdim;" and Horace, the prince of phrase-mongers and proverb makers, has an equivalent thought in the line "Hac urget lupus, hac canis."

When Halliburton's diverting creation, Sam Slick exclaims with a great air of original wit that "The skin is nearer than the shirt," it becomes necessary to point out that he stole the sentence bodily from Plautus ("Tunica pallio proprior"), and that Plautus filched it, word for word, from the Greek of Theocritus. Moreover, the thought, however different in its setting, is substantially the same as that conveyed in our "Charity begins at home," which in its turn is but a repetition of the "Proximus sum egomet nichi" of Terence.

Similarly, "Two of a trade never agree" is but a translation from Hesiod; and apparently contradictory but equally veracious aphorism that "Birds of a feather flock together" finds a parallel rendering in "Pares cum paribus facile congregantur," and the latter, as usual, is from the Greek.

A beautiful but perhaps comparatively unknown proverb, "Mother's truth keeps constant youth," is equalled by the German "Mutter breu wird täglich neu," and surpassed, as we think, by the French rendering, "Tendrisoe maternelle, toujours se renouvelle."

Our ordinary aphorisms "'Tis darkest before dawn," or "When things are at their worst they mend," or "When need is highest help is nighest," or "Man's extremity is God's opportunity," are after all but variations on the mediæval saying, "Cum duplicantur lateres, Moses venit."

We may fondly dream that "Man proposes, God disposes," is an original observation, but the French are quite on a par with us with their "L'homme propose, le Dieu dispose," and the Spaniards with

"La gente pone y Dios dispone," the Germans with "Der mensch denkts, Gott lenkts," and so on.

Our proverb of "Where there's a will there's a way" is common to every language we have any acquaintance with. The French, with their usual epigrammatic brevity express it in three words, "Vouloir c'est pouvoir;" but the thought was probably centuries old even before Virgil remarked "Possunt quia posse videntur."

"The proper study of mankind is man," sang Pope; but an older than Pope (Epicurus) exclaimed in similar strains, "Satis magnum alter alteri theatrum sumus."

When Byron penned that beautiful line in "Childe Harold," "The doom Heaven gives its favourites,—early death," and its equivalent in "Don Juan,"—"Whom the Gods love die young," he very properly added "was said of yore," for he was translating from the Greek.

Flattering ourselves that we are dauntless under failure, and that our wits are only sharpened by adversity, we frequently remark that "necessity is the mother of invention," but perhaps few are aware that they are such scholars as to be quoting Euripides.

Enough, and perhaps more than enough, has however been said to prove what needed no proof, that the simpler and more homely the thought, the greater the probability that it struck mankind ages ago, and is now current in every tongue.

In this essay we have, after all, but touched the outskirts of the subject; but we trust we have shown, however feebly, that proverbs may be traced through our homely English, through sprightly French, keen Italian, and stately Spanish back to their Latin guise, and so finally to that home of all that is eloquent, weighty and wise, the imperishable monument of genius known as Grecian literature.

If, through the study of proverbs, we can appreciably aid the study of those great languages in which they are enshrined, we shall have amply fulfilled the purpose with which we sat down and directed the attention of the studious to a subject worthy of far more attention than we busy colonists are apt to give it.

L. M.

Transvaal Hymn.*

Oh! Monarch of Creation,
Almighty King of Kings,
Thou ruler of all nations,
Disposer of all things;
To whom belongs all glory,
All honour, power, and praise,
Whose reign supreme, triumphant,
Knows neither change nor days.

To Thee, to Thee Great Giver,
Our prayers we now present;
God save our Free Republic,
And bless our President!

Our records boast no glory,
No conquests yet begun;
Our place in fame's vast story
Must yet be earned and won;
And may no blemish darken
The still unwritten page,
To cause our name dishonour,
In History's future age.

To Thee, to Thee, &c.

Oh! may our fields be fruitful,
Our flocks increase ten-fold,
And may our children prosper,
As Israel did of old;
May never plague torment us,
From pestilence defend;
Make every soul a Christian,
And every foe a friend.

To Thee, to Thee, &c.

Around our wide-spread borders,
Do thou maintain a peace,
Till freedom reigns with order,
And all dissentions cease;—
Till Thy right hand dispelling
The heathen gloom of night,
Shall enter every dwelling
The gospel ray of light.

To Thee, to Thee, &c.

A. H. B.

* The above has been forwarded to us for publication in the *Cape Monthly Magazine*—although it has already appeared in some of the Transvaal papers.—Ed.

Currency and Banking.

No. II.

THAN money, few things have had more numerous and more varied definitions. Its origin and proper use are, however, sufficiently well known to require much explanation; and a few words only will be given here by way of fixing phraseology.

In the rudest times simple barter of articles was presumably the primitive form of adjusting mutual transactions among men; but in process of time the substitution of some particular commodity or commodities as a medium or media of interchange naturally became imperatively necessary. Accordingly, almost every commodity has been used as such, representing in some degree or other the value of other commodities, at one time or another, or among one people or another, in the world's history, the only condition being the general recognition of the medium. Ultimately, from their many inherent and, as a whole, reclusive qualities, the precious metals—gold and silver—came to be universally accepted among civilized mankind as the *best* commodities to form the standard measure of all other commodities, governmental coining of the metals being the last step in the progress of the determination of the question, "What is money?" in order to afford a necessary official and legal guarantee of quantity and quality as between man and man and nation and nation.

Money and currency have sometimes been used erroneously as synonymous terms. Strictly speaking, money is what one man may legally give, and another is bound to accept, in the settlement of a transaction; in other words, it is *legal tender*. Currency includes this, but is something more. It may be (1) *intrinsic* in the shape of metallic money, a commodity of itself; or (2) it may be *symbolical*, based on what is termed *credit*,—*i.e.*, a written or printed *undertaking to pay money*, which undertaking may or may not be legal tender. Metallic money is thus the thing signified, while paper currency, issued on the credit of the issuer, represents the sign of symbol only.

In its general sense, accordingly, currency proper includes, in addition to the coined metals, *whatever passes current* in a country, voluntarily or by compulsion, as an instrument of sale, purchase or exchange of commodities, such as bank or other promissory notes or post bills, bills of exchange, drafts, cheques, &c. It is, however, in its more restricted and usually accepted sense, that of bank or other paper notes privileged to perform the functions of money, that it is here proposed to consider the subject of currency; and it will first be necessary to treat of the *principles of credit* as applicable thereto.

Money, we have seen, is a commodity capable of representing all other commodities. Credit may represent, potentially, either money or commodities; credit may, therefore, exist where no money is

actually held. It is older, so to speak, than money, and the man who offers his credit to his neighbour who accepts it, if he does not actually possess money with which to settle a transaction between them, has it reasonably in prospective, or has certain means of obtaining it on emergency or occasion for it, at a due date. Credit implies the *faith*, founded on strong rational grounds, that by the realization of certain possessions money, or that which is convertible into money, a promise or undertaking to pay will be fulfilled. A currency, therefore, based on credit, and meant for use in the place of money, should either involve the possession of an equal quantity of the commodity (money) which it represents, or the undoubted means of its being forthcoming, or partly by both.

Paper curreney may be of three kinds,—(1) that issued by private individuals, or (2) by public joint-stock companies, or (3) by governments. The relative merits of the three may vary according to circumstances affecting the credit of each.

In the case of an individual or private firm, his or their credit is necessarily more liable to contingencies than that of the public company, but it may of course be quite as reliable. It is usually for purely *local* purposes that individual credit is offered as the basis of a paper currency, and within the radius where the individual's means and position are held in high repute. The vicissitudes of fortune and circumstances, however, detract from the utility and value of such a currency, compared with that based on collective credit.

The joint-stock bank of issue has corporate credit, as well as the collective credit of its shareholders, to the extent of their liability s such, on which to rest its claim to emit paper currency. Its notes are only part of its liability, no doubt; but if due provision be made for such other liabilities, and it confines its issue within its actual resources, whether of coin held, convertible securities, or of capital uncalled-up, its paper money may be considered provided for. It ought always, however, to have a considerable margin of resource over and above the whole of its liabilities to provide for contingencies before it can be said *adequately* to have secured its paper issue, and to have made good its right to exercise the privilege. Hence it is that because all good joint stock banks by their constitution and practise fulfil this condition, their credit as issuers is publicly trusted more extensively than any other form of credit used for the purpose, so far as experience has yet proved.

National credit is the sum total of individual and social credit, based on the sum total of a country's resources. The guarantee of the British National Debt, for example, rests on this form of credit, —the *faith* that the resources of the nation are equal to its liquidation in case of need. So also would be the conditions of a government paper currency; but to such an employment of national credit there are many serious objections, especially in the case of a young country or colony. All kinds of credit,—individual, joint stock, or

national,—are liable to contingencies ; but in relation to its security for paper currency perhaps national credit is most sensitive to internal and external disturbing influences, and it must never be forgotten that in proportion to the *immediately available* means for making paper money convertible into coin will be its liability to depreciation, and consequently its serviceableness or unserviceableness as an unvarying circulating medium.

One of the best and ablest of short discussions we have seen bearing on the relative advantages of the different forms of credit employable for currency purposes appeared in the London *Economist* of 28th January, 1865, on the question, "Should there be one issuer or many?" A short *resumé* of the *Economist's* argument is as follows: "A country where the issue is entirely metallic being supposed, how is the metal to be substituted by the paper? Credit is the instrument, and three questions will test the plan. 1st. Is the suggested issuer the person or persons who will most easily *gain* credit, and so most easily introduce the notes? 2nd. Is he the person who best *deserves* that credit? 3rd. Is he the person who will best *use* that credit? Three different methods being further supposed of applying the test: viz.—(1) the State issue, (2) the monopolist bank issue, and (3) the competing bankers' issue ; how do they answer the required purpose? The two first criteria a State issue might satisfy, but it could not use its credit on a nation's latent capital or savings. Few men would hoard *paper*. Therefore, a bank must be the medium by which people would be induced to leave their money. This is a late step in civilization. The bank note is an advertisement. The State issue cannot act as *the beginning of banking*. It would not economise the cash of the community. Banks are to capital what railways are to people,—the former takes the money, and the latter the people where they are wanted. The progress of one country compared with another may be seen in the economy of capital which banking has or has not diffused. A State issue would be a gratuitous loan without interest, but it is dearly bought if it delays the growth of banking. Again, a monopolist single establishment will never *best* substitute paper for gold. It would have been ruin to the Bank of England to put down branches in every country town or district. The local man of standing first issued notes, then attracted small savings, then became a great banker. Wherever there was capital and credit conjoined with the establishment of the free popular system, first would come the paper bank note, then the bank deposit receipt, then the utilization of local capital. No monopolist bank or State issue could do that work."

The opinion of the high authority quoted in the foregoing paragraph should be sufficient of itself, apart from other considerations, to disabuse the minds of such in this colony as cling to the pet idea of a government paper currency. Of the advantages of paper money to a country, all the best writers on political economy

speak more or less in praise. It is the substitution of an inexpensive for a very expensive circulating medium. Adam Smith observes, "The gold and silver money which circulates in any country may be compared to a highway which, while it carries to market all the grass and corn of the country, produces itself not a single pile of either. The operations of banking (in the matter of paper issue), by providing a sort of wagon way through the air, enable the country to convert, as it were, a great many of its highways into good pastures and corn-fields, and thereby to increase very considerably the annual produce of its land and labour.—'Wealth of Nations.'"

Mr. Nassau, senior, says: "When a nation has reached a high state of commercial improvement, when it possesses in every district banking establishments enjoying perfect confidence, and the use of written orders and promises, or in common language of paper credit, has become familiar, the use of (metallic) money as a medium of exchange may be entirely dispensed with, except for those small payments which are not worth the trouble of issuing a note or draft. The use of *money* affords no gratification. It is a troublesome and costly mode of supplying the deficiencies of barter, and is abandoned whenever these deficiencies can be supplied at less inconvenience or expense." Again, "Nothing can be more correct than Adam Smith's illustration (above quoted). The use of the precious metals' or of any valuable article as money, like the use of fertile land for a road, may be necessary, but it is a necessary evil."—"On the Transmission of the Precious Metals from Country to Country, and the Mercantile Theory of Wealth."

A more recent writer, Mr. J. R. McCulloch, remarks: "Besides being a source of profit to the issuer, the employment of paper, provided it be properly secured, is a great public accommodation. . . . . Its employment, and the various devices for the economising of currency to which it has led, enable the business of a commercial country like England to be carried on with *a fourth part*, perhaps, of the gold and silver currency that would otherwise be necessary. The cheapest instruments by which exchanges can be effected are substituted for the dearest; and, besides doing their work better, this substitution enables the various sums which must otherwise have been in use as money, to be employed as capital in industrial undertakings. Of the various means, whether by the introduction of machinery or otherwise, that have been devised for promoting the progress of wealth and civilization, it would not be easy to point out one better calculated to attain its end than the introduction of a properly organized paper money."—"Encyclopædia Britannica," article *Money*.

The economy of paper money may be summed up in two propositions: (1) It saves the wear and tear of a metallic circulation, and (2) where the credit is good it enables the issuer to put so much more capital into use. The circulation of money, metallic or

symbolic, properly regulated, will always become the repeated cause of the production of new portions of property. A small quantity of anything in constant use does more good than infinite quantities locked up. The seed must be sown to produce the tree ; and knowledge to render its benefits must be disseminated. So money, like other possessions, fructifies by use only. Perhaps no country in the world has achieved such extensive and lasting benefit from the economy of its capital through its paper currency as Scotland. The judicious application of the principles of credit by and to her banks of issue has operated to the extent of marvel. Where would have been her present wealth in agriculture, shipping, mercantile and industrial interests had only gold and silver left and returned to the counters of her banks? It is not, to speak strictly, that credit has the function of production itself; but "without it," says Mill, "the productive powers already existing could not be brought into complete employment."—"Principles of Political Economy," page 311.

D. D.

Launch of the "Undine."

A gallant craft is launched to-day, in glory and in pride,
And rank and fashion speed their way from all the country side.
A plucky crew, with skill anew, propel the shapely boat,
And many a cheer proclaims to all that "Undine" is afloat.

That name which so endears romance to all who love the tale,
Who wander o'er the waters wide, or stem the rising gale ;
Who view in every wave a form, though dimly to be seen,
And inly fancy, 'mid the spray, they gaze upon "Undine."

Ah ! misty clouds obscure the past, and shade the olden time,
And dying glories, fading fast, ring out the passing chime ;
But yet a halo bright surrounds, in wreaths of vernal green,
The lovely brow of that fair maid the poets call "Undine."

Then here's a health to our "Undine," our new-born water sprite,
May she be like her prototype, as beautiful and bright,—
May she command the winds and waves, may nothing intervene,
To make her failing of her name, the beautiful "Undine."

C. W.

Springs: their Nature and Mode of Occurrence in this Colony.

This is undoubtedly a subject of great importance and deep interest to most of us in the Colony, and I propose in this paper discussing the phenomenon fully, and offering some suggestions that have occurred to me in regard to it. I may just remark, by the way, that my conclusions are the result of some twelve years careful examination and study (geologically) of the subject; and I venture to hope they will not only be interesting to the student of nature, but of practical value to the community at large. I have more especially conducted my investigations in the upper districts, where, from the almost entire absence of constantly flowing rivers, and from the frequently recurring droughts, the subject is one of more vital interest than in the coast country, where there is more abundant moisture. The popular theory of springs, with all due deference to the believers in it, is entirely erroneous, as I shall show. The idea is (I am speaking of that prevalent amongst the Boers) that springs issue from "aaren" or veins of water running underground. This notion is chiefly based on surface indications. Thus, a spring occurs on a man's farm, and where the water issues he observes a "ruff" or "aar," as it is called, of rock differing in hardness, colour, &c., from the adjacent rocks; along this "aar," he finds water bissies and other moisture-loving plants, which are considered, and rightly, indications of subterranean water. On his neighbour's farm is also a spring; and probably he finds, which is often the case, that this spring is on the identical "aar" from which the water of his spring issues. He says, "here is an underground stream of water, with its course clearly indicated." This is very pretty, and no doubt self-evident; but *why* at those particular spots does the water come to the surface? Besides, on the farm are dozens of other "aars" coursing in various directions, similar in every respect to the water "aar," except in the matter of moisture, water bissies, &c., and hence termed "drooge aaren." Why should they be thus dry? Another thing may be observed, that on the adjoining farms, for a great many miles round the bissies and springs occur in "aars" which all course in one particular direction, and that *only* in such the springs occur. Why is this so? Then again, how is the supply of water kept up?—a riddle I think it would puzzle the believers in the "aar" theory to solve, but easily explained by the true theory of springs, as I shall show. This invariable course of the water "aar" has no doubt been observed by certain shrewd men (such as the great water-finder some while famous in the Eastern Province), who thereupon have started as "Water Wysters." This, together with the ordinary indications, would be sufficient for them; the simple principles on which they worked being disguised from the mores imple Boers by various hanky-panky tricks,—tricks no doubt

originally suggested to the wysters by the superstitious ignorance of the majority of these people. For instance, at the time that the above mentioned celebrity was creating so much excitement, one of the sons of the soil one day described to me the *modus operandi* of the diviner, as witnessed by himself. He walked about the farm for a little while, he said, with eyes intently fixed on a little thing in his hand that "drilled" as he went along. Suddenly the "thing" became motionless ; the wyster stopped as suddenly, and stamping his foot on the ground declared *that* to be the spot. Then would follow directions about obtaining the water, accompanied by all sorts of high-flown nonsense about there being enough water to carry away in its rush, when opened, a young child, and so on, and so on, I can account for the innocent employment of a compass originally, viz., for ascertaining the course of the dykes. On one occasion a Boer was apparently profoundly impressed with my superior powers. I was using a chronometer to ascertain the amount and direction of the dip of some bed,—the instrument happened to be rather an elaborate one, serving the purpose of a chronometer, level, and compass. With such an instrument I was evidently a peg above the ordinary run of "wysters." After stupidly staring for some time, quoth he, "is die dan de ding wat de water wyst, Mr. Gilfillan?" A quadrant, damaged aneroid, or anything in that way may be very successfully displayed at times.

I shall now proceed with my theory, or rather the accepted theory, of springs. As a spring is a purely geological phenomenon, or rather is dependant on certain geological conditions, I shall have to commence with a slight sketch of these conditions, in which there will be no necessity for entering into questions of comparative age, paleontology, structure, &c., of the strata as not in the least bearing on the subject. We shall merely glance at their physical character and disposition, and show that by these alone is the nature of springs modified.

All along our coast we have displayed a belt of highly contorted strata, extending some considerable distance inland. This excessive contortion gradually ceases until we have the beds stretching away in long-sweeping undulations, the dip so slight—averaging about thirty —that to the casual observer they appear horizontal. This contortion is beautifully displayed in the parts along the beach where the docks are exposed ; the beds seem for the most part to be standing on end, and if the dip is carefully observed they will be found to repeat themselves, sometimes at very frequent intervals. At Zuurberg, Woest Hill, Port Elizabeth, Cape Town, Mossel Bay, Montagu Pass, Meiring's Poort, and many other places we see this contortion displayed. At Meiring's Poort is one of the grandest exhibitions of the kind, the excessive contortion and gradual quiescence, so to speak, as we proceed northward, being beautifully and uninterruptedly displayed, giving to one the idea of a boiling surf, rollers, and at last gently oily heaving of the water as one proceeds seaward. In these

contorted beds occur the first class of springs I shall treat of. Let us suppose a series of contorted beds, dipping east and west, their strike will then of course be north and south. For my non-geological readers I must explain that the "dip" of a stratum is its inclination in any direction; let, for instance, several books be placed one on the other and tilted up at one end, whatever angle they are tilted to will be the angle of "dip." The "strike" of the stratum again is a direction at right angles to the direction of the "dip." If we now suppose these strata to be scarped down gradually along the strike from elevations, such as the Zuurberg or Woest Hill to the sea level, springs will occur along this slope;—for water, either from rain falling on or rivers flowing over the outcrop of such beds at high levels, would sink into those that are porous and re-appear at lower levels wherever the beds crop out, that is, where they are not covered by impervious alluvium or overlaid by other horizontal beds. Again, suppose a series of contorted beds dipping as before, and suppose a scarping in the direction of dip and strike, a kloof, for instance, running parallel with the strike, springs will occur in this kloof at each of the points marked A*. We now come to the next and most important class of springs, those occurring where the strata dip only in the long-sweeping undulations above mentioned.

Let us again suppose a series of beds dipping about three degrees uniformly for one or more hundred miles, as they actually do sometimes, some of them porous, interstratified with impermeable beds, we can understand that at their outcrop a comparatively large surface of each across and along the strike is exposed. Let rain fall upon such outcrops, or rivers flow over it, a certain portion of water would sink into the porous beds to re-appear at some lower level outcrop, the impermeable beds over and underlying them confining such water and preventing it from sinking away or rising to the surface until such outcrop or other means of egress occurs. From the fact of the strata dipping in a uniform direction for such long distances, outcrops are necessarily very rare, and we should only have springs at very long intervals if that were all they depended on; and here we come to the solution of the "water aar" mystery. The "aar" is nothing more or less than a dyke of Greenstone or other eruptive matter. To define a dyke let us imagine a number of cracks in the earth's crust similar to what may be observed in drying mud, having no particular direction and extending down unknown depths; imagine these cracks subsequently filled with eruptive matter, and we have what are called dykes, solid wedges of rock coursing in all directions; such of these dykes as take a course at right angles to the dip of the strata would have the effect of damming up the water in the porous beds, but they, likewise, serve to bring it to the surface. If anyone have the opportunity of observing such a rock section, as is shown at the "Driefontein Krantz" cutting, near Cradock, on the main road from Port Elizabeth to Colesberg, he will see that where a dyke cuts

* We regret our inability to lithograph the diagram to which our contributor here refers.—Ed.

through the strata the portion of the latter adjacent to it is highly indurated and seamed, and jointed with a network of cracks, resulting from the intense heat of the originally molten matter. These cracks afford the means of outlet for the dammed-up water, and we have a "water aar" with spring and bissies. Such dykes as run with the dip or thereabouts are consequently dry "drooge aaren;" it may happen, however, that two dykes, each bearing diagonally down across the dip meet, causing the water to rise at the angle of junction. If we trace one of these dykes we will find it in parts sometimes very thick and considerably elevated above the surface, forming hills, koppies, &c. In other parts we will find it again there and denuded down to and below the surface, forming "poortjies." Wherever we have these poortjies in the retaining dykes—as I shall call them—we have a spring, or, at all events, strong indications of water. Springs may also occur in open level flats, the dyke being for a long distance almost and sometimes quite hidden. At the point where it sinks lowest, and the surface level is lowest, the spring will occur. These are all facts patent to the geological observer, and the most important use may I think be made of them.

For instance, take one of these retaining dykes, we find, if it is an extensive one, several springs occurring at intervals along its course, perhaps all of them weak and insignificant, and utterly useless for any industrial purpose; or one may be tolerably strong and the others weak. Let us now, by some means, increase the outlet at any one of these; choosing the strongest, we shall at once have an increased supply of water at the expense, perhaps, of the others, but they separately are useless; combined, of the utmost value; the advantage gained is most apparent. Then, again, as only a comparatively small quantity of water can leak out by the natural outlets—the cracks,—there are doubtless enormous reservoirs of water stored up below us, which only require free tapping; and, as compared with the enormous extent of surface covered by these slightly-inclined strata, and consequently their vast capacity, any openings we may make for tapping them are mere pin holes, so we need not be afraid of exhausting the supply, which is also constantly being kept up by the agencies referred to. These water-bearing strata are not always solitary; we may, and do have, as I have experienced, successive deposits of them, and each one when pierced would yield an additional supply. Many other cases may be put, but it is needless to do so, as they would suggest themselves to the reasoning mind wherever the necessary conditions are presented.

These advantages may be best secured by means of Artesian boring. The operation is necessarily somewhat expensive when deep boring is undertaken, but the corresponding advantages gained are more than proportionate

There is a mode of strengthening springs very much in vogue, viz., by blasting,—a most dangerous practice, as it is quite possible, particularly in the case of a thin dyke, to shake it to such an extent downward as to allow the water, instead of rising, to flow through

and continue its course along the beds which *dip away* from the opposite side of the dyke : the dam wall, in fact, is pierced. Such cases have actually occurred ; besides, by blasting, a great ditch is made, and the water is obtained at an inconveniently low level.

Before concluding, I must cite a curious case of a disguised spring of the first kind ; it occurs at Mossel Bay. The highly-inclined outcrop is scooped down towards the sea in the form of an inclined trough ; this trough is nearly filled by a thick bed of sand some two miles long, which acts as a huge sponge by its capillary force, absorbing and retaining the water which issues from the porous outcrops below. For the supply of the town tanks or "water houses," as they call them, have been excavated in this sand bed, into which the surrounding water drains ; of course, the more tanks there are constructed the more water will be procured ; gradually, however, this natural reservoir must be exhausted, if the supply from the springs is not equal to the drain from the sand, and I am led to believe that the supply is not sufficient, for it would seem that in the last ten years the amount of water has considerably decreased. Boring would in the case of such springs be useless. In the Goup and Karoo generally dykes are of very rare occurrence, consequently the springs are few and far between ; whenever they occur, however, they are good.

GEO. GILFILLAN, F.G.S.

A Parlous Dream.

"Thou art in a parlous state, Shepherd."—*Shakespeare.*

The way was steep and tedious ; true the beautiful view rewarded one for any weariness, yet it was fatiguing ; and by the time I turned the corner of the mighty mass of granite, I was fairly out of breath, and my legs trembled under me. The fresh mountain breeze, however, soon refreshed me, and after a few minutes rest, I began to enjoy the magnificent view. Before me was a vast expanse, stretching for miles, and only arrested in front by the Drakenstein Mountains, fierce, rugged, and bare-looking in the broad sunlight, yet as the sun began to descend, appearing lovely with varied tints of grey and green, flecked here and there with spots of red and gold.

The view to north and south seems without a limit, except the horizon towards the north ; table land rolls far away beyond Bain's Kloof, which can be seen distinctly. At one's feet lies the Paarl, stretching its slow length along, oak trees between vineyards on all sides ; but the eye rests not on the white sides of the houses, or on the thatched or metal roofs ; the former and the latter shining with a painful whiteness and glare in the fierce sunlight, but is led by the loveliness and the verdure of the vineyards towards the winding river, the course of which is marked by the glitter of the sun, as its waters rush here and there in small cascades, there and here a broad sluggish stream.

Yet the loveliest view tires one, after a while, and I soon found

myself searching for the wonders of which I had heard so much—the rock standing upon one point waiting for the giant's push, to be sent headlong into the valley, the whispering stone, the lover's grotto, the baboon's cave, &c.

But I was alone, so the rock must still be left an ever-abiding menace to those who dwell beneath it, the whispering stone must hide its secrets from me, the lover's grotto had no charms,—I found it but a cold and draughty tunnel. I tried them all; there was but one marvel left to explore—the baboon's cave; the entrance of which is close to the ground, and very narrow; too narrow, in fact, for an ordinary sized individual. I struggled for an entrance, but it seemed in vain. I determined to remember Miss Dombey's advice, and "make an effort," and so I did, and, with a mighty squeeze, a sound of compression, and a sense of universal snapping—one last struggle—my forehead in most violent contact with the hard substance of the edge of the stone, and I was within, and found myself in unconscious instinct, sitting with my hand upon the place which had received the blow, and uttering my favourite word and principle *Wacht-een-beetje*.

But my unconscious instinct was not long suffered to develop itself, for I quickly became aware of a new sensation and a discovery; for before me, sitting in much the same attitude which I had assumed, was a grave, serious, though amiable-looking individual, who, regarding me with some attention and a certain air of grave consideration, gave utterance to the common-place inquiry, "If I had hurt myself."

"Hurt myself," rejoined I, "I should rather think I had; have you never learnt by violent contact that granite is harder than the bone of the head?"

"Doubtless," rejoined my strange host, "but then you see I should never have tried the experiment under the same circumstances; my eye would have taught me better than that."

"That's all my eye," retorted I, with a loss of temper, as well as of dignity, in perpetrating such a pun. "All my eye, indeed," said I warmly, "'t would be all very well if I had eyes in my poll, but I have not."

"Pray, what, then, has become of your third eye?" said he curiously, "have you met with a previous accident?"

"Third eye!" I exclaimed, "What do you mean? "Mean! Why this," and here, with a sudden action of his hand, he drew from the back of his head that which appeared to me to be a small piece of leather-like substance which fitted flat down the bridge of his nose, and with this, looked me full in the face, at the same time *shutting his eyes*.

My attention was drawn at once by an irresistible attraction to the point of his nose, to what seemed like a small but most sparkling and diamond-like eye. You can easily imagine that any surprise was only exceeded by my curiosity, when I further observed that this singular eye was following me with attention and noting my surprise.

"A third eye," I exclaimed with unfeigned astonishment—"a third eye! is it possible?"

"Possible," said he, "where is yours? What! are you one of those

wretched creatures who for misdeeds have been sentenced to lose the perfecting and completing organ of vision ?"

I hastily assured the strange being who was before me that not only was I no criminal or malefactor, but still, further, that I had never possessed, nor did any of the community among whom I lived, possess such an addition to the ordinary means of sight, and a short examination on his part of the top of my head assured him that I did not possess even the smallest evidence of a rudimentary third eye. When thoroughly convinced that my denial was thus far correct, he proceeded at my earnest request to show me the advantages and peculiarities of this "third sight."

"What you do without this eye; I cannot imagine," said he. "I should be lost without it. When I desire to see what is going on behind me, I have but to throw back my elongated ocular pachyderma, and I take in by my vision all I wish to know." Suiting the action to the word, he threw back from the bridge of his nose, the aforesaid leather-like band, with attached eye, and turning his head round, showed me *an eye in his poll!*

"But," said he," after all this is not by any means the chief value of this organ of vision. I have but to replace it in the position in which you first saw it, and with its aid, in combination with my other eyes, my power of vision increases twenty-fold, so that I can see objects clearly which would otherwise appear very far off." "So," said I, "you possess a natural portable telescope."

"But this extension of vision is not all," he rejoined. "I could spare its other powers even better than this last; for when I close my pair of eyes, and depend on my small eye alone, I am able to magnify objects immediately placed before it to a very great extent; and in these days of adulteration and scientific analysis such a power in an eye is not to be despised."

"Why, you are not only a walking telescope, but a movable, animated microscope, with a convenient back sight," exclaimed I.

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The air blew coldly as I awoke from what I suppose had been a sound sleep. I looked around me, anxiously expecting to meet the gaze of that extraordinary eye; but my new friend was gone. I sought him, but he was nowhere to be found. The sun was just set, and I feared, with a severe injury to my head, to stay any longer on the mountain. I descended, my mind fully occupied with the wonder I had seen and hoping to renew my acquaintance with a being blessed with such an uncommon visual organ; but though I have often returned to the klip, I have never been happy enough to meet this extraordinary creature; but, without doubt, when I do, I shall persuade him not only to allow the public to have a more detailed and scientific account of his peculiarities, but further endeavour that he may entrust himself to my hands that the enlightened and genuine Cape public may have an opportunity of seeing and examining so marvellous a denizen of their southern land.

J. P. L.

The Crowning of Cetywayo.

[In the latest Blue-books received from England we have a detailed and elaborate report from Mr. Shepstone of the expedition sent from Natal to celebrate the Crowning of Cetywayo, the Zulu King, as eing of historical interest and importance. We print the following extracts.—Ed.]

The next day I paid the return visit to Cetywayo at Umlambongwenya, accompanied by the gentlemen before named, the several officers of the volunteer corps and, my native headmen. Cetywayo received us cordially as before ; those who, from not understanding the language or other reasons did not wish to stay through the long interview before us, were, by Cetywayo's orders, shown whatever there was to be seen of the Zulu Royal Family and apartments, and returned to camp. Major Durnford and my son, with the Natal Native Idunas, sat down with me to an intervier with Cetywayo and the councillors, that lasted for five hours without intermission. It was of the most interesting and earnest kind, and was conducted with great ability and frankness by Cetywayo. Theoretically, my business was with the councillors who represented the nation, but, had it not been for the straightforward manner in which Cetywayo insisted upon their going direct to the point, it would have been impossible to have got through the serious subjects we were bound to decide in the time we did. For instance, they had been evading an important point, and fencing for some time, when Cetywayo said, "Silence, all of you ! Do you hear the wind ? "—"Yes," they replied, "What does it say ?—We cannot discover that it says anything ! " "That is exactly what you have been doing. Don't you see what my father means? Why do not you say so and so ? " hitting the point exactly. He treated me with the most marked respect, and always addressed and spoke of me as his father. The subjects discussed and agreed upon (except No. 3) that day were as follows :—

1st.—The relations of Natal with the Zulus, which should be continued on the same footing on which they had been heretofore under Panda's reign ; and Cetywayo added that he wished them to be more cordial and intimate ;

2nd.—The new laws to be proclaimed by me on Cetywayo's installation, the particulars of which, as given hereafter, were fully agreed upon at this meeting, and which amount to a kind of Bill of Rights, which may be pleaded by and Zulu subject suffering under oppression in future ;

3rd.—The foreign relations of the Zulus and the circumstances which have brought about a strong feeling of estrangement between them and the subjects of the South African Republic ;

4th.—The position of the Missionaries and their converts in Zululand ;

5th.—The introduction of labourers from beyond, through Zululand, by means of an organized system of resting or feeding places.

61. It was late before our conference ended, and on taking leave of Cetywayo I impressed upon him the absolute necessity for his avoiding bloodshed the next day, which was to be devoted to the old but dangerous custom of general recrimination. I cautioned him that it afforded an opportunity for every man who hated his neighbour to injure him, and

probably cause the loss of his life by reckless and false accusation. He promised that he would do all he could. He said it was difficult to restrain Zulus on such occasions. The next morning I sent a message to him to the same effect. I informed him that my orders from my Government were imperative ; that I could not consent to become a witness to the shedding of blood, and if I found that my caution was being unheeded, we should at once all leave the country. The answer returned was the same as that given to me personally.

62. The place of assembly was in full sight of our camp, at two miles distance. We could see thousands congregating, and soon the whole of the large open space, enclosed by the outer fence, seemed one dark, dense mass of human beings. The day were on, and the sun set before the masses dispersed, and some of the business had to be postponed to the morrow ; but it was gratifying to learn that so far, at least, the meeting had passed over without loss of life. Sunday came, and we had our usual Church parade. The meeting at Cetywayo's Kraal was resumed but with smaller numbers present, and ended, as we had all hoped, without bloodshed. These were the days on which I felt the greatest anxiety for the fate of the mission. It was not the accidental killing of each other, brought about by sudden quarrels between regiments and by personal squabbles between individuals, that was to be apprehended ; such things are of frequent occurrence, but produce no political effects. The danger was lest political opinions or acts should suddenly become a recognized cause for taking men's lives, and the consequences or end of this no one could foresee, and the expedition might have found itself overwhelmed by a revolutionary movement far beyond its control.

63. On Monday, the 1st September, preparations were early commenced to carry out the installation. Mr. Consul Cato, assisted by Messrs. H. C. and G. Shepstone, went over and pitched a large marquee, brought for the purpose, in the central space of the military kraal. They decorated it inside with the shawls, blankets, and other showy articles which had been brought as presents. In the middle of one side stood a table covered with drapery, with a mirror, in front of which had been placed the head-dress ; the design was taken from the Zulu war headdress, suggested by Mr. Dunn, after consultation, I believe, with the Zulus, improved upon by the master tailor of the 75th Regiment, and signified the Zulu trappings of war subdued to a peaceful purpose. There also stood his Chair of State, with the scarlet and gold mantle upon it, so that the marquee presented a very tasteful apearance.

64. Cetywayo had not in any way interfered with, or suggested any portion of the programme, but he was anxious that, in accordance with the theory upon which we had hitherto acted, I should at some part of the ceremony take possession of him, and so transform him that his own people would not know him ; it must not be done in public ; the Zulus had given him over to me ; I must take him from their sight a minor, and present him to them a man ; I must take him as a Prince, and restore him to them their King. To save time and avoid accidents, always the danger in such cases, I had dispensed with the complimentary entrance of the Zulu Regiments.

65. At noon we proceeded to the Umlambongwenya Kraal, where the ceremony was to be performed, leaving our Camp in sole charge of five or six natives. Major Giles organized the order of procession, in which we

entered the lower gate with the band playing. I was accompanied by the officers and gentlemen already named, and others who were desirous of seeing what took place. The brilliant uniforms of the officers formed a contrast with the costume of the clergy and the miscellaneous dresses of some of my companions, and added much to the appearance of the procession. The Artillery, Mounted Volunteers, and the band of the Maritzburg Rifles formed on the right of the marquee, my natives on the left, Cetywayo with his Councillors and my party formed a group in front. The Zulu people described three-fourths of a circle about fifty yards off, and may be estimated at from 8,000 to 10,000, mostly young men. These latter were forced into their position not by word of command so much as by the free use of sticks by their officers ; it seemed to be many blows first and then a word, and some of them appeared to be severely hurt. I could not help thinking, as I sat and noticed this violence and quiet manner in which it was taken, how different the condition of the natives in Natal was, and whether the extreme jealously with which our laws guard the infliction of corporal punishment on young natives is a good or an evil. The contrast seemed too great ; and it appeared unreasonable to expect the same obedience from the same people under such different circumstances, although as necessary with one country as with the other.

66. When the order desired was established, Cetywayo wished to examine the guns. Capt. Escombe caused the peculiarity of the breach-loading to be explained to him ; he was surprised at the facility with which an open cylinder could be closed for firing, but seemed disappointed that they were not larger. On returning to our seats I stood up and explained in the Native language the nature and importance of the ceremony I had come to perform, the condescension and good-will of the Government of Natal, shown by its allowing me to come, and by sending such a complimentary escort to accompany me ; and after adding such introductory remarks as appeared necessary, I proceeded to the business I had in hand. I thought it would be best that all the points I wished to establish and impress should be presented in the shape of questions, and that I should require audible assent to each to be given by all the brothers of Cetywayo, and the rulers and councillors of the country who formed my audience, for the common people were too far off to hear me speak.

67. To avoid mistake or omission, I read from a paper I had prepared, and to every proposition I received audible and hearty assent. I then handed this paper to my eldest son, who acted as my secretary, and said I desired him to preserve it and to be the witness hereafter to the arrangements and laws it described, as I had been to the arrangement made at Nodwengu (welve years before), and which we were completing that day. The questions and points were as follow :—

" Have not I entered Zululand at the request of the Zulu nation to install their new King ?"

" Have not I been requested to come because I was the chief witness to his nomination by his father at Nodwengu ?"

" Is not Cetywayo the son that was then nominated, and is not he whom the Zulus now wish me to install ?"

" So say you all ?" In addition to the general and vehement assent given to this, Uham said " Yes, every woman and every child."

"Have you not requested me to proclaim new laws, to be administered under the New King, by means of which you hope that the New King will reign peacably over a contented people and a prosperous country?"

"Have not we agreed that the life of a man or woman, high or low, is the property of the country, and that the King has vested in him that property on behalf of the country?"

"Have not we agreed that for any man to take life, without the previous knowledge and consent of the King, is to take that which belongs to the country without the country's consent?"

"Have not we agreed that every man ought to be allowed to answer for himself before his immediate head, and, if he wishes, before the King any charges brought against him, and that he ought not to be condemned finally before he has had an opportunity of so doing?"

"Have not we agreed that the punishment of death for every crime destroys a people?"

"Do not I stand here in the place of Cetywayo's father, and so representing the Nation?"

"I proclaim therefore,—

"1st.—That the indiscriminate shedding of blood shall cease in the land.

"2nd.—That no Zulu shall be condemned without open trial and the public examination of witnesses for and against, and that he shall have a right to appeal to the King.

"3rd.—That no Zulu's life shall be taken without the previous knowledge and consent of the King, after such trial has taken place, and the right of appeal has been allowed to be exercised.

"4th.—That for minor crimes the loss of property, all, or a portion, shall be substituted for the punishment of death."

68. One of the Councillors remarked that the practive of witchcraft by the prople was the cause of their frequently being put to death, and that witch doctors from Natal were sometimes the accusers. This gave an opportunity for me to explain the evils and mischief brought about by these impostors, and the policy adopted by the Natal Government towards them. The Zulu idea is that, if they be surpressed, wizards and witches will have full swing and destroy many victims. They were told that the suppression of witch-doctors in Natal, *i.e.*, the fact that these practices were punishable, had not increased the rate of mortality, nor would it in Zululand; no law of a special nature, however, was laid down, seeing that accusations of witchcraft are included in Nos. 1, 2, and 3. Although all this was fully and even vehemently assented to, it cannot be expected that the amelioration described will immediately take effect. To have got such principles admitted and declared to be what a Zulu may plead when oppressed, was but sowing the seed which will still take many years to grow and mature.

69. I then led Cetywayo to the tent, followed by my own party of Europeans. When all had entered, the door was closed, and guarded by two sentries of the Durban Royal Artillery; and the Prince was now in our possession, unattended by any of his people, except one body-servant. He rapidly glanced at the different articles before him, but showed no sign of emotion. The transtormation had now to be effected; and after I thought sufficient time had elapsed, I desired him to stoop that I might put on his head-dress and scarlet mantle, and we were ready to return

to our position outside. In the meanwhile, a carpet, presented to him by Capt. Macleod and Mr. Fairlie, had been spread, the chair of state we, had brought him placed upon it facing the people, and another of a less pretentious charaeter, but so disguised as to look suited to the occasion, was put alongside for me.

70. I than led him to his seat, and after a few minutes rose and presented him to his brothers and councillors as their King, and desired the heralds to go round and make a proclamation to that effect in the face of the people. Thus he, who a few moments before has been but a minor and a Prince, had now become a man and a King; and, as if to suit the humour, one or two of his warriors pretended to doubt his identity, so complete was the change. The proclamation occupied perhaps a quarter of an hour, after which the Durban Artillery fired with great regularity and effect a salute of 17 guns, the Volunteers saluted also, and the band struck up.

71. The new laws had been made known to the councillors and great men, but not to the common people ; and in my view it was important that they should be proclaimed to the latter in my presence, to prevent their being stifled by the nobles. Cetywayo agreed ; but the difficulty was who should do it, his heralds or mine ; I thought that his, and he that mine, should do it ; so it was settled that both should go, his to make the actual proclamation, mine to correct and supply omissions. These latter processes were so frequently necessary that the people requested the Zulu heralds to leave the whole duty to mine, saying they wished what they heard to be authentic.

72. This operation took fully half an hour. The volunteers had dismounted and left their horses standing in line, linked in sections of fours, and one man to a section. The proclamation being ended, all the thousands of Zulus present lifted their shields, and struck them sharply with sticks in token of applause ; the sound is strange and startling to one hearing it for the first time, and it terrified the horses ; they wheeled suddenly to the left, and seemed charging down upon where we were sitting. This belonged to a class of accidents that sometimes produce disasters, and for the moment one seemed likely so to happen ; the horses were fortunately, however, very soon under control again. Cetywayo at once saw what had taken place, and exclaimed "They have left their horses, and they are startled at the noise of the shields." The quickness with which the accident was remedied soon changed the aspect of affairs, and turned adverse criticism into admiration at the smartness with which the mischief had been stopped.

73. The ceremony being now over, I addressed the brothers and councillors, pointed out to them their duties, and impressed upon them the new responsibilities laid upon them by the new laws, and their relations to their new King. I told the King that I well knew the difficulties of his position, and that he could overcome them only by moderation, and prudence, and justice, but without these they would certainly overcome him. He assented to what I said, and thanked us very heartily for what we had done for him. After paying a complimentary visit to his sisters, I bade him farewell, and we all left in the same order we had entered, without serious accident or misunderstanding. The marquee was handed over to him as it stood, and he immediately went to take possession of it. We were followed by crowds of Zulus, who were loud and extravagant in their expressions of satisfaction at what they had seen and heard.

74. The next day I paid my farewell visit to the King. He was surrounded by his brothers and councillors as before ; all the subjects of our first two long interviews were again fully discussed and explained, and I felt satisfied that they were fully understood. A remarkable incident occurred during this conversation. Ulamu, who has always been looked upon as the King's brother, and for some time before the installation, as his rival, said he wished to take advantage of my presence to explain publicly what his real position in Zululand was, for though it was well known to the Zulus, it was not known to the white inhabitants of Natal and of the Transvaal Republic. In both these countries he had been frequently accused of designing to usurp Cetywayo's place ; and if it were not that Cetywayo and the Zulus well knew that such a thing was impossible, these accusations would long ago have cost him his life. He then went on to explain that, although he was really Panda's son, he was legally the son of Panda's deceased brother, and that he already possessed all the rank and property, namely, that which belonged to Unziba, which he could claim, that he had no right to claim anything that belonged to Penda's family ; and that, before any such right could accrue to him, every male member of that family in Zululand and Natal, and even he who is in the Transvaal, must die and leave no son behind. All present listened attentively to this statement, and earnestly assented to it ; Cetywayo said he wished to assure me that it was strictly true, and he was anxious that it should be known.

75. At a sign from Cetywayo some fine tusks of ivory were now brought from the royal apartments and laid before me ; a herd of oxon had previously been driven into the enclosure. Cetywayo addressed me, saying he wished to convey to me the thanks of the Zulu people for the services I had rendered them, and that the ivory and oxon I saw represented their gratitude. "He well knew," he said, "that the acknowledgment was small, and it was in no way the measure of what they felt, and that it indicated more the poverty of the country than the greatness of their obligation." "But," he added, "it is no bargain or sale ; it is an expression of thanks, and of a wish that on your way home your heart may be white and your path prosperous."

76. I thanked him, and said that the Government had cheerfully incurred the cost of the expedition, in the hope that it would tend not only to the future benefit of Zululand, but of the countries adjoining; that, therefore, whether the thanks of the Zulus were represented by what did or did not fill the eye was of no consequence ; that the Government of Natal would be satisfied if the great objects it had in view were put in a way of being accomplished. Cetywayo replied that nothing he could give would represent the obligations of the Zulus to the Government of Natal; they themselves now belonged to the Government, and must be accepted in payment of that debt ; but the offering they had made was an acknowledgment to me of the personal services I had rendered to the Zulu nation.

77. To have declined the present would have been considered an affront. I therefore accepted it, and on my return to Natal, had it sold by public auction, and the proceeds paid into the Treasury. After having again touched upon all the subjects which had been agreed upon between us, and offered him my congratulations and advice, I took my final leave, and returned to camp.

A Plea for Colonial Girls.

By a Lady.

When Mrs. Jamison's scholarship was made over to the South African College no doubt a thrill of joy touched alike the hearts of the learned professors and of the aspiring youths eager to gain an honour provided them with so liberal a hand.

It occurred to me then that a similiar gift in favour of the girls would be equally well bestowed. A short time since the same generous lady came forward with a second munificent bequest to the South African College. The needs of the young ladies again crossed my mind, and have at length emboldened me, through the pages of the *Cape Magazine*, to draw the attention of others, as liberal as Mrs. Jamison, to our young sisters, who require encouragement in their pursuit of the higher branches of knowledge.

Thanks to our zealous superintendent of education, facilities for education have wonderfully multiplied of late; and there has been an increased desire throughout the Colony to secure sound education for both sexes. The improvements already effected should by no means stop here; on the contrary, they should be regarded merely as stepping-stones to a more complete system.

All who take an interest in ladies' schools would be delighted to hear of the handsome prizes awarded at the Good Hope Seminary towards the end of last year; and would hail with satisfaction the idea of the proposed medals. There would be greater cause for rejoicing, however, could my pen succeed in inducing some among us, to whom wealth with all its responsibilities has been entrusted, to endow a scholarship for girls. The "lassies," quite as much as the lads, need to be animated by the hope of honours and rewards. At the close of a school career here a trip to Europe and a further course of study at some of the ladies' colleges there would develop the intelligence of a bright girl in her teens quite as effectually as that of a lad's course at a University. I have no sympathy with the "woman's rights" movement; but I stoutly maintain that a girl's mind, at the outset, is composed of as good material as a boy's; and few will deny that for future needs it is quite as well worth the pains bestowed upon its cultivation. The happiness and prosperity of the next generation depends much upon the way girls are prepared for their destiny as the future mothers. Biography is rich in instances of most highly gifted men who were indebted chiefly to their mothers for becoming worthy of the fame they acquired; and without equal advantages how can the girls become fit companions intellectually for well-educated, intelligent men? They should not, therefore, any more than the boys, be confined to the narrow sphere of this backward Colony. I would give every girl a chance of visiting Europe before settling down to the duties of mature life. Parents are frequently heard to complain of the terrible expense of girls' education in comparison with boys. That there is cause for such a complaint is but too true. Why is this? The reasons are the want of union and co-operation!

With the exceptions of the Good Hope Seminary and the Huguenot School recently established at Wellington, the expenses connected with the conducting of a ladies' school fall entirely on the teacher. For lads, however, colleges are provided, some of which in the Colony are even endowed. It is obvious, therefore, that their education will be less costly. * * * * * * * *

Happily, the Cape youth have not been forgotten; but I know of no such award for the equally deserving girls. In Scotland both sexes have been provided for in this way, and that, too, not by Acts of Parliament but by private munificence. Allow me, then, again to remind the large-hearted, wealthy members of Cape society to come forward as others have so nobly done, and endow a scholarship,—the first scholarship for girls.

A gift bestowed during the donor's lifetime is twice blest. The honoured name would be handed down to posterity, and many a merry, studious girl would bless the liberality that had devised so welcome a gift, and revere the memory of a donor who had not turned a deaf ear to a plea for Cape girls.

THE CAPE

MONTHLY MAGAZINE.

Evolution and Class-Legislation.

Mr. Froude, on returning to England from South Africa, dined with his friends at the Westminster Palace Hotel, and delivered a speech which has been reproduced in several papers in this country. Mr. Forster, who, as a prominent English politician, and as the acknowledged father of the latest English Education Act, has a world-wide reputation, presided, and in proposing the toast of Her Majesty's Ministers, expressed his sympathy with the views of Mr. Froude. It is because we think it by no means unlikely that these views may be wrongly made use of, perhaps in a way that Mr. Froude and Mr. Forster would consider illigitimate though they clearly lay themselves open to misrepresentation, that we propose entering a short demurrer. There are still men amongst us who openly avow that, inasmuch as the white man and the coloured man are two separate individual entities—Shemite and Hamite entities—it is unmerciful and unjust to have one set of laws and institutions for both. It is derogatory to the dignity of the Shemite to be tried by a law which is just for the Hamite; and it is cruel, impolitic, and unwise to expect from the Hamite conformity to a law which is useful for the Shemite. There are others, again (and it seems to us that the evolutionist must be amongst them), who maintain that, though attended with perhaps some momentary evils, there must be but one public law, as there must be but one public purse, for one community. Shortly stated, the opinions are, "There must be class (*i.e.*, colour) legislation;" "There must be no class-legislation." Now, as in the first place we have to admit that, though we dissent from the reasonableness of class-legislation, we nevertheless think Mr. Froude and those who coincide with him wrong when they urge upon the Imperial or the Colonial Government to step in and summarily refuse further dispensation to native tribes to follow their use and wont in any respect; and as the evolutionist, whose belief involves that of the gradual development of man, has to admit, in the second place, that such native tribes as were referred to by the distinguished diners are as yet much further removed from the ideally perfect social state than the average white man is, it seems to b

incumbent upon us to explain why we do not think we are inconsistent in holding the two beliefs,—first, that the customs and institutions of native subject-allies should not be suddenly and altogether approximated to those of the dominant and higher race; and second, that a society such as our own, embracing within its pale such widely differentiated units as a Bushman and a Barkly, should have but one law for all its members. To state this concretely, we have to explain why, for instance, such an institution as polygamy may be tolerated amongst native subject-allies located in their own reserves by a dominant higher race like the British which has adopted monogamous institutions; and why in a mixed society such as that of this country there should be but one law against polygamy, theft, and vagabondage. We have to show, if we can, that these two beliefs are not mutually exclusive as they are sometimes held to be, but that the acceptance of them is based on a sound philosophy such as can alone sanction practice.

We are met at the threshold of our inquiry by the question, What is the proper object to which the legislative energies of State organizations should be directed? There is probably but one answer to be made by all impartial persons, that this object is the preservation of all the most useful members of the society which is interested. The evolutionist who brings to the study of the phenomena of human society a mind properly prepared in biology and other sciences, will maintain that this preservation of the most useful has this primary requirement, "That each shall so live as neither to burden others nor to injure others." It must be apparent to the meanest understanding that to subject any organism to a great and sudden change must be a source of evil to such organism. To take a homely illustration, the truth of which has become proverbial,—The fish, with its blood-purifying apparatus adapted to its medium, speedily dies when removed from that medium; the quadruped, with its peculiar apparatus, similarly dies when its medium is made the subject of great change from which there is no escape. Men who have inherited a constitution suitable for a certain climate, fail so to adapt themselves as to continue their species when they are suddenly removed to a widely different climate, and come to be so adapted only when their ancestors during many generations have slowly migrated over the intervening areas. This, of course, with reference to the physical constitution of man; but there is no reason to believe that there is not an analogous law with reference to his mental constitution. It is a trite remark, which we hear almost daily, that the natives whom we are trying to civilize,—that is, to raise to conditions, of living having affinities with our own,—can only be brought so far and no further. But the reason doubtless is that our reputed civilizing agencies are cumulative, and that the effects require to be hereditarily transmitted through many generations before the coveted intellectualization stamps itself on the individual or the race. The civilization of which the average white man is possessed requires a

corresponding average development of the intellectual and emotional endowment of humanity; the one connotes the other, and is, if we may legitimately so say, its necessary corelative. From those who have reached that stage of development those activities may be rigorously demanded, and upon them those restraints may be innocuously placed which experience has sanctioned. But if these same activities are demanded from, or if similar restraints are attempted to be thrusted upon, those who have not the antecedently necessary intellectual and emotional culture,—who are as yet too much uncivilized, we meet with a disappointment analogous to that which we meet with when we expect an organism to adapt itself unpreparedly to a greatly changed medium, when instead of adaptation we see decadence and dissolution. In the same way we shall in the disintegration of the social organism, when there is a non-observance of the primary requirement for the preservation of the most useful so far as to force upon that organism modes of living for which it is unfitted. In a similar way a dominant race fails so to conduct itself as neither to burden nor to injure others, when it imposes restraints that are too rigid, and demands activities antecedently unobtainable. Such disintegration can be stayed only when the intruders are warned by the vigorous reactions which their severe restraints call forth to modify their procedure so that gradual adaptation is no longer an impossible contingency; but if the restraints are successfully and indefinitely imposed, and if overpowering force renders reaction futile, the result will be certain. And if this be an acknowledged law in human evolution, how do the Froudes and the Forsters, when they take their ease in their inn and propose the abrupt abolition of native laws and customs, and an equally sudden approximation of the social condition of the Zulu to the social condition of men whose civilization is already hoary with age, differ from the misautochthonists who award the palm to unmeasured alcohol as the best solvent of our social difficulties! They differ, as Erebus and Phœbus, in their motives and intentions; but, starting as they do from opposite poles, they meet in one desert on the same equator,—they bring about the same results. Alike by the history of similar attempts, and by analogy from cosmic history, is the truth of this statement demonstrated. "The gift of 'conservative innovation,'" says Mr. Bagehot,* "the gift of *matching* new institutions to old, is not now-a-days a warlike virtue, yet the Romans owed much of their success to it. Alone amongst ancient nations they had the deference to usage which combines nations, and the partial permission of selected change which improves nations; and therefore they succeeded." When Mr. Froude and Mr. Forster are scandalized by the apparent power which one barbarian male possesses over a plurality of female barbarians,—an amount of power which is said to constitute slave-holding,—and when

* Physics and Politics.

these same gentlemen counsel a new point of departure for legislative interference in such social arrangements amongst natives, let us remember that even here *festina lente* should be our motto, and that we may learn the truth of the old saw, "the more hurry the worse speed," after useless expenditure of energy. If we confine our observation of social relations to the conditions to which alone we are accustomed, we may too hastily conclude that every man should be the husband of one wife, and that the conduct of such husband should be marked by an absence of anything like insolence. But amongst the Zulus, for whom Mr. Froude and Mr. Forster have shown a well-meaning if perhaps an injudicious altonism, there may be feelings of a different order to be considered before we decide on the expediency of revolutionizing this social system. There may be feelings amongst the Zulu women like those which Mrs. Atkinson says are to be met with amongst Tarta women :—"A nursemaid of mine left me to be married, and some short time after she went to the Natchluick of the place to make a complaint against her husband. He inquired into the matter, when she coolly told him her husband did not love her. He asked her how she knew he did not love her? 'Because,' she replied, 'he never whipped her.'" (Quoted by Mr. Spencer in his "Study of Sociology.") Now if in the allotted native reserves the plurality of women who work for one man think it an honour instead of a degradation to do so, it is questionable if it would be for the ultimate benefit of the tribe suddenly to check this state of things by Imperial Proclamation, and if it would not be better to deal in these cases with a salutary *laissez-faire*, after the manner indeed which Lord John Russell counselled with reference to some "customs, pernicious in themselves, but of which the abolition is best attainable by example and gradual enlightenment." (Instructions to Governor Hobson, 1840, quoted by Merivale in his "Lectures on Colonisation.") It is an indisputable trait in the mental constitution of women that they are not averse to an exhibition of power on the part of those who are their husbands or protectors, a trait which frequently shows itself in the attachments of women to those who even ill-use them. If in the mental traits of the women of a tribe we meet with instances of this kind of survival, adjusting the whole nature of the women to the state of things which some argue should be immediately put down by positive preventive legislation, there is room for very grave doubt whether the legislation would be successful or even justifiable.

It appears, however, that when we say that we should tolerate certain laws and customs amongst our native subject-allies, and say at the same time that such toleration is not colour or class-legislation, Mr. Froude would reply with Macbeth,—

> "And be these juggling fiends no more believed,
> That palter with us in a double sense."

While the avowed class-legislationist at once exclaims, Out of thine

own mouth will I judge thee, for if you can go one mile by yourself on such a road as that, how can you refuse to go twain with me? We disown the impeachment in the one alternative as in the other. "Let the galled jade wince, our withers are unwrung." Mr. Froude reminds us that the Zulus are not autochthones any more than the English are. The Zulus, he says, "were not an indigenous race, and had no aboriginal claim on the land they occupied. They were a conquering people who came down there within the last century, burning and destroying everything before them. They were a fierce, brave, daring race." It is necessary to remember this, because it is part of the foundation of Mr. Froude's argument, and doubtless he is so far correct when he says so. Mr. Froude would hold that inasmuch as the Zulus are not autochthones, the now dominant power may without any injustice deny them the privileges which autochthonism should command. But seeing that the Zulus were already in possession when the now dominant race stepped in, and that even now there are something like twenty Zulus to one Englishman, the former, by all those who profess towards the natives that feeling of justice which is based on a judicious sympathy, must be held to be entitled to the privileges of autochthonism. Now the qualifications under which we allow the laws and institutions of the more civilized to be admissable in the case of the less civilized, are understood by us to be pertinent only to the case of lands for the most part occupied by autochthones or those entitled to their privileges,—lands inhabited by the uncivilized in great numbers, and having reserves allotted to such, and governed as dependencies of the purely protected and not even partially self-governing class. These qualifications of the laws and institutions of civilized men are therefore pertinent to the "land of the Zulus." But in a dependency such as Cape Colony, where self-government is only nominally incomplete, where laws and institutions suitable to a tolerably high civilization, if they cannot rightly be said to be indigenous, have been so long established amongst the people that they have become that people's inalienable property, the situation is altogether different. By a route circuitous and sometimes dangerous, through much trial and tribulation, happily diffused over many generations of workers, there has been handed down to us a vast body of law and custom which experience pronounces to be good for something in guiding how "each shall so live as neither to burden others nor to injure others" in a state of society such as the conditions of living have hitherto permitted man to evolve. Though that body of law may be far from being ideally the best,—though the existing social state may be far from being ideally the best, and though we are therefore in duty and in interest bound to keep our eyes constantly open to improvements and not to spurn the "gift of conservative innovation," yet by the very fact of its survival where so much has decayed or perished, this body of law is presumably good, and for the time the best possible. In the case of those, therefore, who come to live

amongst us, and in whose case we wish for the preservation of the most useful, there remains for us but to enforce those conditions under which our own civilization is maintained. If, in deference to the principle of tempering our institutions to inferior races we were to consent to modifications, it is evident that to be consistent we must have a modification suited to each stratum of our society. The Bushman would be entitled to one law, the Hottentot to another, the immigrant Basuto to a third, the enfranchised Fingoe to a fourth, the Eurafrican to a fifth, and the white to a sixth. But not to dwell on such a *reductio ad absurdum*, if, in the absence of class-legislation, we have a warrant for the belief that individuals of inferior race have partially adapted themselves to our conditions of living, and we are thereby strengthened in the belief that the adaptation will become more complete, does not the burden of the proving the expediency of class-legislation lie with those who advocate the change? We submit that the results hitherto obtained are fully as satisfactory as, if not more satisfactory than, *a priori*, we could have expected. That amalgamation has begun* is evidenced by facts such as these,—that natives have become tolerable cooks and housemaids, shoemakers, blacksmiths, carpenters, masons, compositors; that we have seen them teaching intelligently geography and arithmetic as far as decimal fractions; that in the last list of candidates who received the Superintendent-General's certificate of competency as elementary teachers, the majority of the names were those of Kafirs, three if not four being in the honours list. In his own empirical way Captain (afterwards Sir George) Grey bears testimony to the improvement in the laws for natives that is antecedently necessary to their becoming civilized. Heterogeneous, therefore, as our society now is, we would surely be interpreting these indications wrongly if we rejected the inference that our society is destined more and more to acquire solidarity. Even if we had not made a beginning in the adaptive process, we should nevertheless be guided by analogies in the evolution of all living beings to insist that those who determine to cast their lot amongst us should adapt themselves to those laws and institutions which are the best for ourselves. But when the beginning has been made, there can not only be no need for, but there would be impolicy in, consenting to any departure from these laws and institutions. "Enforce these conditions, and adaptation to them will continue. Relax these

* When it is said that amalgamation has begun, the meaning is that, so far as we can gauge the import of present phenomena, the native races, or rather some of them, have given unmistakable signs of adaptability to a higher type of living. The North American Indians, the Australians, our own Hottentots and Bushmen, are vanishing. We are told that the Tasmanian is all but extinct; the Maori seems to think that all the land of his forefathers must eventually fall to the white invader; but the adaptability shown by the Kafir is no less interesting than it is unusual; and his achievements hitherto, as is wished to be noticed in the text, seem to warrant the presumption that he will survive. Anthropologically, we may, in the course of some generations, become a study.

conditions, and by so much there will be a cessation of the adaptive change. Abolish these conditions, and after the consequent social dissolution, there will commence (unless they are re-established) an adaptation to the conditions then resulting,—those of savage life." For such relaxation in these conditions as is demanded by the class-legislationist,—a relaxation, for instance, which would make an individual of an inferior race who has entered into a contract of service with another of a superior race, and who may neglect the terms of such contract, no longer amenable to the laws of society, one of whose members he has wronged, but amenable to summary punishment at the hands of the wronged individual, and who is thereby deprived of opportunities of acquiring a knowledge of the obligations which membership of the new society imposes—would bring no compensatory good for evils of a threefold kind which would then be imported into any scheme for the improvement of the native races by the preservation of the most useful amongst them. For in the first place, if class-legislation were resolved upon and became an institution in society simultaneously with the desire of the higher members to improve the lower, the initial movement in the required direction is indefinitely postponed, if indeed it is not made impossible. Secondly, if class-legislation is adopted at any time subsequent to such initial movement, less protection is thereby immediately given to those who, having passed the initial stage, are already fairly on the upward road, and they forthwith begin to descend to the state from which they have emerged, or rather to that which is on a par with the modification in their environment, there is reversion to the abandoned type, and thus the pains and penalties of the adaptive process have to be undergone twice, presuming that the class-legislationist, having once attained his object, should at any future time consent to such ameliorations in the laws as would allow of the possibility of similar improvements in those who would really have become his victims. While, thirdly, there is the retributive or reflex evil, which implicates the class-legislationist himself, if happily this evil should spend its force upon him alone, the evil which, giving him a daily or perhaps hourly experience of the necessity for the use by himself of threats and punishment towards others, generates and nurtures the fatal tendency to look invariably for a written law to guide him, to do nothing that he does no believe to be ordered for him by some real or imagined personal overseer; in which way he loses sight of the paramount function of all training and of all social institutions, to make man a perfect law to himself, to fulfil the highest conditions of life spontaneously. *Propter vitam, vivendi perdere causas.*

Wm. Bisset Berry.

I'm Married, Yes!

I'm married! Yes, I've got a wife!
Right glad I am it's true;
I bid henceforth a bachelor's life,—
That wretched life,—adieu!
Let him who likes it live alone,
Stiff as a poker, cold as stone,
And nurse his spleen, and sigh and groan,
And mope the livelong day.
I tried that life till I got sick,
And bit my nails down to the quick;
I'd soon have been a lunatic,
Or grumbled myself gray.

I gathered round me jovial men,
Whose company might please;
They swarmed and revelled in my den
Like maggots in a cheese.
My kitchen fire blazed all day long;
They played and drank deep draughts and strong,
And filled the house with mirth and song,
And bacchanalian din.
I shared in all the revelry;
My life like theirs was fast and free,
But cards nor billiards, wine nor glee,
Could fill the void within.

Too long of idle winds the sport,
Of fancies light as air,
At last I drifted to a port
And anchored safely there.
'Twas there I did my fair one see;
No longer was I fancy free,
I felt she was the girl for me,
And vowed she should be mine;
I popped the question there and then;
She spoke of false and fickle men,
But as I sighed and vowed again—
She whispered, "I am thine!"

Don't think it was a hair-brained trick,
An act of sheer caprice,
That I should woo like Benedick,
And wed my Beatrice.

Thank God! I've got what I desire,—
A wife of whom I never tire,
Who loves me with a love entire,
  As is the love I give.
A pearl is she beyond all price;
She's made my home so sweet and nice;
It's quite a little Paradise,
  Where any prince might live.

One thing, 'tis true, I much deplore—
  Ha! what is that, you say?
Well, that I did not long before
  Find out this better way.
Were I a single man again,
A tenant of you dismal den,
And met the selfsame maid—why then
  I'd vow she should be mine;
Without a moment's doubt or fear,
I'd pop the question then and there,
Nor rest until she let me hear
  Her whisper, "I am thine."

Farewell the cares and petty foes
  That bachelors molest;
Of all the cures for common woes,
  A wedded life's the best.
I've no more bother with the cook;
In pots and pans I need not look,
Nor pry into each secret nook,
  For there my wife has sway.
I take a nap, with friends converse,
I sing a song, indite a verse,
I smoke a pipe, or do what's worse;
  She gives me my own way.

When morning streaks the Eastern sky,
  And glads my opening eyes,
I lift my voice to Him on high
  Who gives me such a prize.
In all my web of life I find
No thread of discord intertwined;
We're one in heart and one in mind,
  Our love no coolness knows.
The peaceful hours glide swiftly on,
While we our stage of duty run,
Till sinks to rest the western sun,
  And bids us seek repose.

There's no man in the world below
  Can happier be than I,
In Hymen's lap,* through weal or woe,
  Content to live and die.
Whatever idle fools may prate
Of jealousy, and strife, and hate,
And dreadful things prognosticate,
  Don't hear a word they say.
Depend upon it, it's not true.
Don't hesitate, my boys, but do
As I have done,—you'll never rue ;
  Get married while you may.

Just follow the advice I give.
  Don't tell me you are poor.
No man was meant by Heaven to live
  A wretched bachelor.
Be off forthwith, and act like men !
If once you fail, why, try again ;
The maid will whisper "Yes !" and then
  Your fortune's made for life.
You'll cease to mope, forget to sigh ;
You'll lift to Heaven a grateful eye,
And morn and eve devoutly cry,
  "Thank God, I've got a wife !"

R.

After the Flemish.]

South Africa.

South Africa is the Cinderella of the British-Colonial family. She is generally ignored, unappreciated or scolded by her big and ugly relatives. Without strain the comparison may be continued. Cinderella in due time eclipsed her sisters by the brilliancy of her fortune. She it was who charmed and married the Prince. So also is it reserved for South Africa to become the most splendid of all colonies. Those who hear these words are laughing in their sleeves at least ; just as the jealous sisters laughed at the very notion of Cinderella's foot fitting the glass slipper. But however obscure colonial South Africa may be at the moment, it is destined to grow until it becomes the dominant power in all Africa, facing Europe over the Mediterranean and Asia over the Red Sea. When that day comes several Princes will be anxious to marry her who is now but as a little kitchen wench among the cinders.

The reason for this belief is founded on the unconquerable vitality of the particular European elements in the settlements of South Africa, and especially upon the facts to which that vital force has already given birth. The little leaven will leaven the whole lump. This is no theory. The process is going on and will go on. It would not be reasonable to be so confident were South Africa held like the Indian presidency by military force. It is possessed, occupied, settled, turned into a dwelling place, a home, a country; and its European communities are not regiments or services, but complete societies planted and rooted in the soil, multiplying and spreading with the vigour of a richly endowed nature, easily mastering the other forces with which it comes in contact.

Without the evidence of facts those assertions would be mere bombast. Let us then rapidly glance at what South Africa has already become,—what has been accomplished, acquired by it, and what influence it has obtained over its native peoples. And here let it be said that it would be vain indeed to talk of European colonization spreading and establishing itself throughout Africa, unless there were reason to be confident that mere conquest and territorial posssesion can be accompanied by the art of breaking in, taming and training the natives to co-operation. In one very important respect Africa is unlike America and Australia. It is inhabited by peoples who are to be counted by the million and who are not accommodating enough to perish as the white man flourishes. The development of colonization and the progress of dominion must include the wise management of the natives for their good. Had South Africa no proof to show of its ability for this work, its best friends might well be silent about its future. Happily, however, it has such proof. It has not only added territory to territory and pushed its frontier lustily to the North, but it has also, by an honest purpose, firm endeavour, and fair skill, given newness of life to large bodies of African natives.

In the first place, however, let me direct attention to the size and expansiveness of the South African settlements,—to the advancing tide of European occupation, as also to the signs of that growing wealth, power and enterprise which promise to give to that tide a perpetual flow.

The coast line of British South Africa curving from the mouth of the Orange River, which opens into the Atlantic to that of the Tugela, which empties itself into the Indian Ocean, is not much less than 2,000 miles in length. It must not be supposed, however, that British South Africa is merely a littoral strip, with here and there at distant intervals, a coast trading station. From the southernmost point where Cape L'Agulhas fronts the Southern Ocean, the Cape and Natal traverse the interior over a distance of quite 500 miles, while the inland frontier cord, from foot to foot of the great arc, is a thousand miles long. Within this sea coast and landward boundary of three thousand miles there are quite three hundred thousand square miles of absolutely British territory. British South Africa—which is not the

whole of Colonial South Africa—is therefore a vast possession and a splendid starting point for civilization.

In this large land her Majesty has more than a million subjects, one fourth being of European blood. The Cape, Natal, and Griqualand West are dotted over with towns, villages, and homesteads and are traversed by roads. Colonisation has not tarried by the sea shore, but has settlements on the remotest points of the inland frontier. Industry has taken set forms everywhere within the boundaries, and commerce with its usual enterprise has pushed its operations far beyond the border. Three railway lines are being constructed and three more are being surveyed, the Cape colony alone venturing upon an expenditure in this department of £5,000,000. The telegraphic wires have a length of 2,000. The products and exports of the settlements are various and some have a certain splendour of attraction. They include wool, wheat and wine, diamonds, ostrich feathers, and ivory, copper and gold, coffee and sugar, fruit and fish, cattle, sheep, horses, and ostriches. The total annual value of the British South African exports and inports is not less than fifteen millions sterling. The total annual value of its products used in home consumption is probably an equal sum. The landed, house, and stock property and public works of the three English colonies represent an estimated investment of more than 150 millions. The annual revenue of Cape, Natal, and Griqualand West together is more than a million and a half. There are some States in Europe of historic name which do not enjoy the public income of these obscure British colonies. Greece, Norway, Switzerland, and Saxony are in some cases poorer and in all not richer, in this respect, than the Cape, about which ninety-nine out of every hundred Englishmen know little more than that it is somewhere in Africa, or than that it was once the halfway house to India. Portugal, formerly the mother of colonies, can but boast a revenue of three times that of British South Africa; and Belgium, that hive of industry, and Holland, once the owner of the Cape, can only count five times as many millions. The importance of this revenue fact will be all the more recognised when it is borne in mind that it represents an annual sum contributed by British South Africa entirely from its own resources, and expended entirely on government, the administration of law, the protection of life and property, the promotion of education, the maintenance of postal lines, and the construction of harbours, roads, bridges, railways, and telegraphs. This comparatively large sum is the organised State contribution of the British possessions to the great civilizing institutions and agencies at work in South Africa. And it is steadily increasing. The institutions of British South Africa are liberal and fairly vigorous. The Cape Colony has a constitution similar, in some of its broad features, to that of England. It has a responsible Ministry and a Legislature of two Chambers. The form of Government in Natal is after a narrower type, while that of Griqualand West is still more official. District or county affairs are in the hands of divisional

Councils, and many of the towns have mayors and corporations. Education boasts one university, several colleges and high schools, and a system of grants in aid which is considered to be admirable. Religious agencies abound, as there is scarcely a denomination in England which is not represented in South Africa. The Anglican Church has there six bishops, and the Church of Rome three; while of other bodies, the Wesleyan Church alone has there a hundred clergymen. Of newspapers British South Africa has no less than forty. Five years ago it fell to my hand to establish the *Diamond News* on the banks of the Vaal, at a spot which a year before was in the desert, quite 700 miles from Cape Town. The commercial institutions include all the customary agencies of trade, banking and insurance. Corporations well known in London, such as the Standard Bank, the London and South African, and the Oriental, have their branches in almost every town of any size, and the local companies are numerous and thriving. The important interests of communication with England is served by two steam lines, worked by the Union Company and by Donald Currie & Co., and affording weekly arrivals and departures. European immigration is promoted by an annual vote of £25,000 and the maintenance of an agency in London. Here I mark a stage in the argument. I have given a catologue—a mere list—of some of the facts of effective colonisation presented by British South Africa. May I not venture to say that if the great mid-continent is to be subdued to civilization, a foothold has been gained from which a series of steps forward, by and by to become "leaps and bounds," may be expected to be made?

Another group of similar facts has yet to be mentioned. To the north of British South Africa are two hardy and vigorous offshoots of colonisation—the Orange Free State and the Transvaal Republic, both independent communities, using the Dutch language because chiefly of Dutch descent, but having within and about them powerful English influences. These republics have a white population of singular aptitude for the rough and ready outwork of colonisation, and numbering from fifty to sixty thousand. Their joint area is not less than 220,000 square miles. Each State has a settled government. The President of the Free State was formerly a distinguished pleader at the Cape bar. The President of the Transvaal was formerly a distinguished clergyman of the Cape Dutch Reformed Church. Both are born subjects of Her Majesty. The discovery of gold at Marabastad and Leydenburg has given new attractions to a country of wonderful fruitfulness. President Burgers is now on his way to Europe for the purpose of arranging, if possible, for a railway from his capital and the Goldfields to Delagoa Bay. The most advanced point of the Transvaal Republic is a hundred miles north of the tropic of Capricorn and not more than three hundred miles from the Victoria Falls on Livingstone's Zambezi; while Zoutpansberg, the, at present, uppermost township of the Republic is scarcely four hundred miles from the Kongone mouth of that famous river. A distance of three or four

hundred miles in Africa is comparatively small when the rate at which settlement advances is considered. The Limpopo, which now bounds the pioneer State of European South Africa, is about one thousand miles north of Cape L'Agulhas, and of that one thousand miles more than five hundred have been added to European possession and rule within less than forty years. It will not take another forty years for the vanguard of colonization to reach the Zambezi River, whose sources are in the very centre and heart of Africa. At this moment the Limpopo is being crossed by the scouts of occupation. Hunters, traders, and missionaries have their stations beyond it; and, so it is reported, bands of fanatics—a class from which the forerunners of civilisation, themselves not always civilised, frequently spring—are, according to their quaint ideas, heading northwards, first for Egypt then for Jerusalem, camping by the way, and leaving marks of travel and rest which in time will become roads and townships. Possession and political boundaries are always preceded by these irregular skirmishers. The limits of a paper do not admit of much elaboration, but I hope that enough has been said to show that, as the two Republics are the result of the restless, migratory habits of the colonists of the Cape, so also, from the same cause, will they certainly be the sources from which an upward flowing stream of pioneering life will continue to issue.

I now come to another part of the argument, which is that the South African colonies have before them a great work in the whole continent because they show, not only the ability to acquire territory and accumulate the means of material prosperity and self-culture, but also an aptitude for the management of the natives.

It is but little understood in England that of all parts of the Empire, India and Ceylon excepted, South Africa contains the largest number of natives under British rule. The North American Indians in the Dominion of Canada, the Coolies of Mauritius, the Maories of New Zealand, the savages of Australia, the negroes of the different islands of the West Indies, and again the negroes of the West Coast Settlements of Africa are, respectively, not to be compared, as far as number goes, to the native peoples of British South Africa. Counting together the forces of the various tribes and remnants of tribes, there are in the Cape Colony, Natal and Griqualand West, quite a million of natives subject to the Queen's Government, while nearly another million in the neighbouring territories of Kafirland Proper and Zululand may be said to be more or less amenable to British authority and influence. Not only as to number, but in respect to everything which makes the subjection of native races interesting and important, the Cape and Natal present large facts. That is to say, the natives in those colonies are not merely there, but they are there as the objects of government and social experiment. They are thought about, acted upon, made the subjects of systems, schemes and institutions. In the Cape Administration there is a Native Department, and there is a Native Department in the Natal Administration. It

is acknowledged in both colonies that the presence of a million of barbarians necessitates the creation of an especially adapted agency in the State, and that any attempt to deal with these people as if they were on a similar footing with the Colonists, on the ground of a common humanity would be a ruinous piece of *doctrinaire* affectation or fanaticism. The manhood of the African native is never for a moment ignored by any party, political arrangement, judicial institute, or social custom of the colonies. But it is clearly seen that he is an African native and not a man of European heritage, in blood or training. Accordingly he has a department in the Government all to himself. There is not only a Secretary for Native Affairs in the Cape Ministry, but there are Commissioners, Governor's Agents, Magistrates, Residents with chiefs, charged to administer justice and maintain order among native communities, according to an unwritten law in which native precedents and customs are regarded so far as they are right in principle. There are schools for the natives. There are missionaries to the natives. There are native taxes. There are lands reserved for the natives. There is a method of converting natives into citizens. And yet it would not be true to say that the institutions and agencies of either the Cape or Natal are, in themselves or in the spirit in which they have been fashioned, intentionally separative. The object of all alike, whether Government officers or missionaries, political institutions as well as religious, is indeed to make the African as much like the European as possible. The purpose of the special departmental agency is to work out all causes of difference in the State. The people of England need not be alarmed when they are told that in the South African Colonies there is a class of her Majesty's subjects under exceptional treatment. There is especial care, but no oppression; guardianship, but no denial of right. Now and then ordinary processes and conditions are disturbed; the barbarian makes a mistake and the colonist blunders. Then comes a period of confusion and apparent wrong. Force takes the place of kindly law and system. The whole scene of disorder is aggravated by the rude conditions of colonial life. English sentiment is startled into more or less vehement indignation. Probably it is well that England should be sensitive. But it should be remembered that even in modern times England has had her seasons of great social and political disturbance, in which floundering and blundering, passion and force, have had their day. It is right for England to preserve for herself and for her colonies a high standard of opinion with respect to justice, equality, and liberty. Only let England temper her judgments of others with the lessons of her own history.

Allowances being made for average exceptions, British rule in South Africa is entitled to be called beneficent. It is, in many important respects, worthy to be classed with British rule in India, of which England may well be proud. As brilliant it is not and cannot be at present. But when the obvious differences are put on one side, there stands out, to those who know what is being done in

both lands, the happy fact that scarcely a single effort is put forth by Government or any institution of society which is not intentionally directed to the elevation and betterment of the natives. The principles and aims of the Government of India are well known in England. The same cannot be said of the character and purposes of the British Government in South Africa. The general English ignorange of the fact that her Majesty has a million native subjects in the Cape and Natal is necessarily accompanied by an almost utter ignorance as to the manner in which the responsibilities of government are met.

The Cape Government has not only a native Department briskly at work, but it publishes a Blue-book on Native Affairs. I do not hesitate to say that this official annual has in it information which can claim to be as interesting and as important to British readers as half the material which Continental Correspondents contribute to the *Times*, the *Daily News*, the *Standard*, and the *Telegraph*. The way in which colonial Englishmen are governing hundreds of thousands of Africans ought to be of as much moment to Englishmen at home as the intrigues of French parties or the fights of Spanish factions. The affairs of Europe must needs be represented in the English papers, but space might very well be found for the vigorous efforts of British Colonists to add to territorial conquests the better triumphs of civilization over the tribes they have subjugated. In the Blue-book published last year there is a remarkable account of the advance made by good government in British Fingoland over the Kei, and in Basutoland over the Orange. Every word is worth reading by every Englishman. The story of the Fingo settlements is indeed a brilliant page in the annals of the Cape. The Fingoes were, in the terrible time of Matuana and Chaka, driven southward from Zululand into the territory of the Galeikas, a Kafir tribe close upon the borders of the Cape. Received as outcasts they are made slaves and called "dogs," which is the proper meaning of the word "Fingoes." The treatment awarded to them was worse than that given to dogs. Life became intolerable to them, and in their misery appealed to the neighbouring colony. This was in 1834. The British Government interfered on their behalf, and the result was that the Galeikas fell upon the unfortunate people and murdered them by tens and scores. Expostulation was answered by the Chief Hintza with the insolent reply, "Well, and what then, are they not my dogs?" Sir Benjamin D'Urban, the then Governor, seized this Chief and kept him and his son and 150 of their people as hostages, and let it be known that he intended to shoot any two of them for every Fingoe killed after three hours' notice. (Sir Benjamin D'Urban was the man for his place, and as a matter of course he was recalled and disgraced. This by the way.) His vigorous threats were successful. The massacre of the Fingoes was stopped. The next step with Sir Benjamin was to deliver "the dogs" from their masters. The Fingoes, led by the missionary Ayliff, whom a not ungrateful people to this day call their Moses and Aaron,

marched out of Kafirland into the colony—they, their women and their children, as poor a crowd as ever fled from bondage. The Cape Colony gave them shelter, protection, land, employment, education, religion, citizenship, and free manhood. I must press the events of years into a few words. The fugitives from Chaka and the dogs of Hintza became men from the day when they crossed the Kei. But this is not all. In time the lands of Peddie, Newtondale, and Kamastone, became too narrow for the Fingoes. British rule preserved them and gave them liberty to increase and multiply. There was no room for them, their herds and their flocks, and they wanted more lands for their picks and ploughs. Then—about ten years ago—there was another Fingo march. The Colonial Government moved some thousands of them into a fruitful and pleasant district over the Kei, settled them under British magistrates, encouraged them to industry and the acquisition of property, and helped them to that start which is at once the difficulty and secret of progress. The measure has been most successful. Under the guidance of wise officers—which is the first and the last of the Cape native system—the Fingoes of the Transkei have become a prosperous people, using ploughs, shearing wool, buying and selling, building houses, furnishing them, making roads, paying taxes, supporting schools, and attending churches. I do not mean to say that Fingoland is a Paradise. It is a very long way from being so. But it may confidently be claimed as a witness to the ability of the Cape to deal with the native question in practice.

I turn now to Basutoland. Seven years ago the Basutos were reduced to starvation by a long war with the Free State. The Cape Government stepped in and by the charm of annexation rescued the remnant of a once flourishing tribe from destruction. A part of their country fell into the hands of the conquering Boers. Over what was left the British flag was hoisted. The next step was to appoint prudent British men—commissioners and magistrates—to take the starving, unhoused and fever-stricken people in hand. This was less than seven years ago, and what now? What has been the result of placing these people, not theoretically, but actually under the care of wise English colonists? The Blue-book shall give the answer. Mr. Griffith, the Governor's agent in Basutoland, says:—

"At the present moment a thorough confidence in the Government and in its administration of the laws seems to prevail everywhere. As a mark of this, I may adduce the fact that the paramount chief Letsie, was without difficulty induced to apprehend his own nephew, a young chief named Sekake, who was charged with the crime of murder, but was subsequently convicted of culpable homicide, and sentenced to two years' imprisonment with hard labour.

"The revenue is collected without difficulty; crime, especially stock-stealing, is rare; and both chiefs and people submit gladly to the laws. From returns which have been sent in to me by the different magistrates, I find that during the year 1873 only five cases

of stealing were reported from the Free State, and in most of these cases the stolen property was recovered before the thefts were reported by the owners. When it is considered that the boundary line common to the Free State and Basutoland extends from the Orange River to the sources of the Caledon, a distance of at least 180 miles, it must be admitted that the Basutos have no longer any right to be called "a nation of thieves," which was the title then given by the Free State a few years ago.

"Materially as well as politically there has been progress. Where only half-a-dozen small shops once existed, some fifty respectable trading stations have now sprung up, the buildings erected at which give a different aspect to the country. Hundreds of wagons enter Basutoland, and traverse it in every direction, collecting and exporting the grain of the country to the Free State and the Diamond-fields. The production of grain has greatly increased, the plough having very generally superseded the Kafir pick. Flocks and herds, which had disappeared from the country during the war, now dot the face of the landscape in every direction. Stone cottages are beginning to supplant the rude native 'hut,' and the Basutos present the general appearance of a thriving and well-ordered people.

"The discovery of the Diamond-fields has had a great effect upon the country; money has come into general use, and commerce has been much facilitated and increased thereby.

"The trade of this territory, one of the principal granaries of the Diamond-fields, has been very largely developed during the past year. In 1872 there were thirty fixed trading stations in the country, a number which during the past year has increased to fifty. Merchandize to the value of about £150,000 has been imported into the country during the same period. The exports have been about 2,000 bales of wool, and upwards of 100,000 muids of grain (wheat, mealies, and Kafir corn), also a considerable number of cattle and horses. The articles which the Basutos obtain from the traders are almost entirely either of British or foreign manufacture, and consequently the Colonial revenue must benefit very considerably by the Basuto trade. The revenue collected in 1873 has exceeded that collected in 1872 by £2,953. Larger areas of land are brought under cultivation each year, and consequently the demand for ploughs continues unabated, and the production of grain is annually increasing. Last year the number of ploughs purchased by the Basutos from the traders in Basutoland was six hundred; this has been carefully ascertained from actual returns furnished by the traders themselves."

With reference to education the report has much to say, but I can find room for only a very few sentences. "Besides the general process of instruction carried on in primary and infant schools at all the stations and outstations in the country, and which are regularly attended by nearly 2,000 children, there are," says Mr. Griffith, "also two important training institutions, established at Morija and Thaba Bosigo, one for boys and the other for girls, which occupy the

best attention of some of the most able and experienced of the missionaries."

The Governor's Agent in concluding his report says, "It gives me much pleasure to be able to say that I have received every assistance and support from the magistrates, and as a proof of the able manner in which they have performed their duties, and the satisfaction they have given the people over whom they are placed, I may mention that I have only two cases of appeal brought before me as chief magistrate. I have also much pleasure in mentioning the names of 'George,' 'Tsekelo,' and 'Sofonio Moshesh,' sons of Moshesh, who are staunch supporters of the British Government, and continue to give satisfaction in the discharge of their respective duties."

So much for the testimony of Basutoland and the Cape Native Blue-book to the genius of the colony for native management. I shall add nothing to this testimony except to say that the point of its meaning is that a good native system is the setttng up of the judgment seat of a man of wisdom and right spirit. It is not theoretical or institutional elaboration, it is the simplicity and directness of personal influence, backed—and I should like this to be well observed,—backed by the presence of power. The Cape colony is strong in the estimation of Fingoes, Kafirs, and Basutos, and this conviction, deeply seated in the mind of Fingoland and Basutoland is of the greatest assistance to the agents and magistrates.

Recent events very naturally suggest the question—What about native rule in Natal? How does that show an aptitude for the work of a civilizing subgugation? This question is a natural one in England, because in England at this time native rule in Natal is supposed to be summed up in the one word "Langalibalele." Very few in this country know what the true history of the natives in Natal has been since 1845 when is was proclaimed a British colony. Thanks to a Bishop's Blue-book and the enterprising London Press, everybody knows, or thinks he knows, that Natal is a place where gross blunders and worse than blunders are committed under the name of native management—that Natal is the place where chiefs and tribes are desolated by rash Governors and panic-stricken colonists. Now the merits of the Langalibalele affair it certainly is not my intention to discuss. I will only ask for my brother colonists in a much perplexed and greatly tried land a little forbearance from Englishmen who are not colonists. Again and again when I have read the indignant and passionate criticisms of Natal mistakes in the Dailies of this city, I have been reminded of an old sea song which says:

> "Ye gentlemen of England who live at home at ease,
> How little do you know of the dangers of the seas,
> Where the stormy winds do blow."

Let it be supposed that Natal fell into an error when it dealt with Langalibalele and his people in the way it did. Still the error of 1873 is not the whole of native management in that colony, any more

than the mutiny of 1857 is the sum total of British rule in India. The history of Natal in its relations to the natives is in truth singular; and in its general character and broad facts, I claim it as an additional proof of the genius of the British South African colonies for native management.

The native questions of Natal cannot be understood without some knowledge of its geographical position and its surroundings. It is a country of 25,000 square miles, diamond shaped. Of its four sides, one faces the Indian Ocean, and one the Drakensberg Mountains which divide it from the Free State, on the north-east side is savage and independent Kafirland full of restless tribes. There is no British colony in the world with surroundings of a more dangerous character.

It must be further and especially observed that Natal is nearly 200 miles from the nearest of the Cape towns, and that the communication between the two colonies is by sea. Natal, then, is comparatively a small dependency imbedded in a part of savage Africa. Now then, let us glance at its white population. Thirty years ago it was annexed. At that time the Europeans there were not more in number than we are this evening in this room. To-day they are not more than 18,000, all told, men and women, old and young. The Government has been that of a crown colony with a difference or two. The salary of the governor was until lately much less than £2,000. It is now not more. The Imperial Government has kept there the wing of a regiment. Well, not to weary you with details, what has this little colony, thus surrounded by dangerous tribes, thus distant from its nearest neighbour, with its handful of whites that would not fill a third-rate town in Dorsetshire, with its underpaid Government and its mockery of a garrison,—what, I ask, has it done in the matter of the natives? It has thrown open its passes and river drifts to the hundreds and thousands of refugees who have fled to it from Zulu cruelty and oppression. It has awarded to these people ample locations, thrown over them the shield of the British name, and given protection, quiet, and the means of a rude plenty. To-day there are more than 300,000 natives in Natal, scarcely one of whom has any other right to be there than that allowed him by British clemency. Natal has become a great Native preserve, and for thirty years, with but one exception, the colony has kept the peace. With half a million of warlike natives on one side; with a quarter of a million of warlike natives on another side, and with 300,000 savages within it, it has had no war and no civil war, until this misfortune of yesterday. The officer who has been in charge of the Natal Native Department is Mr. Shepstone, a born colonist. He has had no special service to assist him. His own salary has not averaged more than £600 or £700 a year. He has had no police except a few natives. The soldiers of the garrison have not been at his command. Simply by his own sagacity and with the help of the patience and courage of the colonists, he has afforded shelter to hundreds of thousands of natives,

subdued their turbulence, and avoided war with the tribes from which the refugees fled.

I sometimes wish that the members of the Peace Society and the Aborgines Protection Society could change places with the Natal colonists. Much as I admire and respect those excellent ladies and gentlemen, I must say that, were they to make the change, in my humble opinion they would not surpass the achievements in native management which Natal and Mr. Shepstone can claim and which no single error can be justly allowed to eclipse.

Gathering together the evidence which I have thus been able to produce of the ability of the South African colonists not only to possess themselves of territory and to arm themselves with power, but also to yoke in to the work of civilization the aboriginal tribes which neither humanity nor expediency desires to see destroyed, I hope I may venture to re-affirm, with some slight chance of avoiding derision, that Colonial South Africa has before it large relations to the whole of the great African continent.

The few remaining minutes of the hour I may perhaps be permitted to use in referring to one or two measures by which Colonial South Africa might be made more effective for its responsibilities and work.

It must be considered to be a misfortune that there should be a divided rule in South Africa, and that this should give rise to jealousies, misunderstandings, and disputes between the British-Colonial Government, the Dutch Republics, and the Portuguese settlements. Such a state of things must be enfeebling and dangerous. Within the last seven or eight years, the causes of quarrel between the Free State, the Transvaal, and the British Government at the Cape have been many and serious, arising chiefly out of boundary questions and native policy. The irritation has occasionally been intense. Should present conditions continue, there will be no security against something much worse than irritation. It is most desirable that now, when the feeling of kinship between all South Africans is strong and warm, the time should be seized for binding together Colonies and States in a national union. Even now the difficulties to be overcome are great, but the lapse of time and the inevitable occurrences of fresh quarrels will make them greater. I cannot pretend to know in what way a result much to be wished is to be brought about, but I am assured in my own mind that it would be useless to contemplate anything but kindly, respectful, and conciliatory approaches to the Free State and the Transvaal. Force is out of the question. The Cape Colony and Natal are full of people having close personal and family relationships with the inhabitants of those States, and also strong political and religious sympathies. Besides, to make them effective parts of a national community, they must take their place willingly. The chief obstacle is the flag. The question with each State is the question of abandoning an independent position for a place in a confederation which would not be independent, but dependent upon England. It is a

question of sentiment, and sentiment is a very obstinate as well as a very delicate force. There is no chance for a South African confederation but through Responsible Government. The idea of a South African Dominion enjoying the same form of government, the same powers and privileges, as the Dominion of Canada, might perhaps, if presented to the two Dutch Republics by an accomplished diplomat, skilled in the art of putting things, win from them that hesitation which in some cases is the prelude to consent. The Cape is now practically a self-governing country. The two Dutch States, by becoming like the Cape, and by entering into a federal union with it and with Natal, would lose but little of actual independence, and would be large practical gainers by the alliance. And here I may be permitted to say that I have, since writing this paper, read with great satisfaction the passage in Earl Carnarvon's speech of last Monday, in which he said: "Hitherto the interests and systems of all the States in South Africa have conflicted with each other. My wish is to see those interests and systems brought into greater unity. I desire, in the first instance, to see a greater development of those great resources which South Africa possesses. Secondly, I desire to see a uniform system adopted in these States, because as long as different systems exist among them there will be a perpetual source of danger. And, lastly, I look most earnestly to a better understanding being created between the two Dutch Republics and ourselves. I think it would be to the interest of all parties to concur in demanding that there should be a better understanding and a more conciliatory course of action between those Republics and ourselves." These are judicious and statesmanlike words, and they are backed, if they have not been suggested, by opinions to which Mr. Froude has given an equally earnest and eloquent utterance. Sentiments of this kind from high authority awaken hope.

I confess, however, that I am not sanguine of any near success. Meanwhile, attention and effort might well be directed to the consolidation of the British possessions in South Africa, and chiefly for the sake of efficiency in the important native work in Natal. A few minutes ago I ventured to attribute the marked success of native management at the Cape to personal influence, backed by the presence of power. I said that the Cape was strong in the estimation of Fingoes, Kafirs, and Basutos, and that this consciousness of strength was important. Now, Natal is not strong in the sense in which the Cape is. The half-a-million of natives in the Cape are confronted by a quarter of a million of Europeans. The natives of the Cape have been defeated in four great wars. In Natal the 300,000 natives have before them only 18,000 Europeans, and they have not been again and again beaten in the field. Then Natal is separated from the Cape by an intervening, independent, and savage territory of nearly 200 miles in length, except at the point where it touches Basutoland. It is this feebleness and isolation which must be accepted as one of the reasons why Natal has not any such facts to present as those which shine

forth so conspicuously from Fingoland and Basutoland. It is a marvel that the little colony has done so much and so well. In order that she should do better, it is necessary to give to her the moral force of a close association with the older, wealthier, and stronger colony. This can only be done by a gradual and speedy incorporation of Kafirland, from the Kei to the Umtafuna, with the Cape on one side and Natal on the other. This is a process which happily is going on. The Fingoe Settlement, the Idutchwa reserve, and Griqualand East are virtually British. The Residents with the Tambookie, Galeika, and other Kafir chiefs are the agents of British political power, and traders, missionaries, and squatters represent other annexing influences. What should be added to all this is the settled intention to take advantage of every opportunity to complete the work, so that the Cape and Natal may touch each other and form together a compact power. The consolidation of the British possessions would make them irresistible. The Zulus of Natal would understand the change at once. It would act as a charm.

Consolidation, however, cannot be brought about to-day or to-morrow, while the difficulties of native management in Natal are immediate and pressing, as Sir Garnet Wolseley is now discovering. It will be a fortunate thing should he, seeing that he cannot bring the Cape to Natal, be able to introduce into Natal the Cape native system in its thorough efficiency. At the Cape there is in reality a considerable native service, including such men as Brownlee, Griffith, Blyth, Ayliff, Bright, Levey, and a score of others. From this service men of experience are told off to locations where they are devoted entirely to the work of native management and improvement. These officers are animated by an ambition to do their duty. They are not overwhelmed with other employment. In Natal the whole responsibilities of the Native Department fall upon the shoulders of a man who is a member of the general Government, and a few men who are magistrates over the Europeans in the districts in which they reside. Properly speaking, there is no Native Service in Natal, and it would be unreasonable to expect that a colony of 18,000 whites should be able to support an agency equal to the effective management of a savage population of more than 300,000. Instead of sending marines to the assistance of Sir Garnet, it would be much more to the purpose were the Imperial Government to supply him with the means of establishing a service in the colony entirely devoted to the labours of breaking in, or alluring, the natives to industry, obedience, and decency. The tribal system, and the power of chiefs and headmen, might then be replaced by fair terms of citizenship, and by the influence of men of vigour, conscience, and sagacity. A dozen such men placed about amongst the 300,000 would work a miracle. The Zulus of Natal are closely related to the Fingoes of the Cape, and Mr. Shepstone awaits only the means and the men to repeat in Natal the singular success which Captain Blyth and his coadjutors have commanded in Fingoland. Natal is a Crown colony, and England

might well spend for a few years an annual £20,000 on a work for which, after all, she is responsible, and for which she makes herself responsible, by occasional interference of a character the most serious.

In concluding these remarks, I may be allowed to say that they take it for granted that the Imperial power will encourage that tendency to expansion which the history of Colonial South Africa exhibits. There was a time, and that not very remote, when England seemed at least to sound a halt. A voice appeared to come from high places saying to "the red line" which remarks on all maps the widening boundaries of the Empire,—"Thus far shalt thou go and no farther." It is to be hoped that that time has gone by, and that once more it is understood that all British colonies, dependencies and dominions have full liberty to advance, and rejoice in the pleasures of growth. There is a pleasure in the act of growing. It was my lot to be in India in the time of that great annexationist, the Earl of Dalhousie, and although subsequent events have clouded the splendours of his rule, yet it was splendid, and history in its long run will show it to have been wise as well as brilliant. At all events, no Englishman then on the soil of India could avoid a sense of satisfaction as the Punjaub, Nagpore, Burmah, Pegue, and Oudh were added to the Empire. It has also been my lot to be in South Africa while the Transkei, Basutoland, and Griqualand have been brought under British rule. I have witnessed the hoisting for the very first time of the British ensign over lands at that moment proclaimed to be British territory, and have felt an enthusiasm of which I am not ashamed,—not ashamed because, from an experience of nearly thirty years spent in British dependencies and colonies, I am convinced that, in its grand and lasting characteristics and results, British supremacy everywhere means not the mere lust of territory and pride of conquest, but the enthronement of justice, the softening of manners, and the substitution of a living progress for the dead levels or quick descents of oriental or savage custom.

[This article which we have taken the liberty to appropriate was an Address delivered by our friend Mr. T. B. Glanville, at the Royal Colonial Institute in London. Although it has already been published in the *Empire*, we put it on permanent record in the pages of this *Magazine* as one of the most admirable discourses affecting South Africa we have met with for years.—Ed. *C. M. M.*]

A Brush with a Leopard in Port Natal.

A FAIR, fresh, spring morning at Port Natal. The last trace of the hand of winter has faded off the hills and dales, and the luxuriant, semi-tropical vegetation, which clothes the slopes around, and had grown brown and sere under the combined action of frost and sun, for four consecutive months, now refreshed and invigorated by the early rains, springs into new life.

At no other period of the year is the fair land of the nativity seen to such advantage, and the traveller, as he winds his way through woods gay with flowering creepers and shrubs, interspersed with intervals of fertile, green campaigns, and watered by many sparkling mountain streams, can scarcely realize the fact that he is indeed traversing the wilds of South Africa.

A busy, stirring time also for the cattle and sheep owner, for the fleecy white clouds that arise in the afternoons from behind the dark crags of the Kathlamba range prognosticate the thunder storms which herald the advance of summer, and warn the lowland settler to seek higher and cooler pasturage for his flock. In these periodical movements of a somewhat patriarchal character the ox wagon of the country plays a conspicuous part, and it would be difficult to make the uninitiated believe the great quantity of our household goods that these huge, clumsy vehicles are capable of absorbing; and yet how, in spite of infamous roads, sometimes indeed but mere tracks, rough stony fords, and like impediments incidental to South African travel, the freight, animate and inanimate, is mostly discharged in good order and condition. It is sometimes advisable on these occasions to detach some of the elder lads of the family to accompany the flocks on horseback, and exercise a supervision over the Kafir herdmen, for your Zulu is at best but a shifty fellow, and frequently succumbs to the fair attractions at some kraal *en route*, and to the detriment of your flock trys to recover lee-way by hard driving—so on the present morning we are only awaiting the dispatch of sundry cups of home-grown coffee, to mount our horses, and proceed on our way. As our destination is distant some fifty miles, and it is intended to camp out at night with the sheep, we are all amply provided with blankets and rugs, securely strapped to the saddles of our stout Basuto ponies, and within the folds of which are concealed the few simple articles of camp equipage necessary to the sojourner in the veldt. The verdant swelling plains through which our road lies are, moreover, well stocked with antelopes and partridges to supply the larder, and afford a distraction to some recent arrivals in the Colony, who have joined our ranks, rightly judging that a journey like the present will give them a fair insight into the capabilities of this new land, and the rough side of colonial life as well.

Threading our way past the now deserted cattle kraals and farm enclosures our path winds upwards between the gnarled, stunted

stems of a Mimosa wood, and the dewdrops sparkle and glitter in the rays of the morning sun on the delicate tracery and gold and silver threads of the many spider webs which twine amidst the close, thorny foliage, for Natal is a very paradise to these fairy spinners. The tall, lemon-scented Ixia grass is also luxuriant here, but ever and anon its prevailing sober brown hue is relieved by patches of emerald green, where the coarse, rank, and older grass has been swept away by the application of fire (as is the primitive fashion in these parts), and the short, wiry young herbage springs forth in its room; but as we top the crest of the low ridge before us the character of the landscape changes, for as far as the eye can reach a green grass-covered plain, now flecked with the white fleeces of the scattered flocks, and unbroken by timber of any kind, stretches away till in the far distance it fades, and is merged into the grey blue shades of the Stormberg Hills.

Mark to the right there! from one of our party. And sure enough an old, trusty pointer is slowly, very slowly, and cautiously drawing up the wind towards a patch of withered grass which the fire has spared; his movements closely watched and mimiced by two youngsters now making their *debut* in sporting life. To vault from our horses (which, with reins trailing on the ground, may be trusted to stand quietly) is the work of a second; and, gun in hand, we approach the old dog, who has now come to a dead point; but it is not to be. The prolonged suspense proves too trying for the patience and nerve of one of the puppies;—it suddenly shoots in and springs a covey of red-wing partridges *(Francolinus Levai-lantii)* which tip over the ridge, and scour down the slope at a pace that precludes all hopes of marking them down. Who but a sportsman can picture the cloud of mortification and disgust that steals over the face of the veteran dog; and his deprecatory glance expresses more plainly than words: "You surely absolve me from blame in this lubberly transaction?" But the birds are plentiful; and when at noon we alight at the door of a friend's farm-house, the game-bags present a comfortable rotundity of form. Hospitality is freely extended to the wayfarer in this too often sparsely populated land, and a hearty voice bids us "to off saddle and knee-halter our steeds, as the family's noonday meal is in course of preparation." A few hours are pleasantly passed in discussing various colonial subjects, and the sun is waxing low in the west as we push on to select a suitable resting place for the sheep.

The spurs of the Stormberg hills rise from the plains to the altitude of some 1,000 feet, and form the first of a series of natural terraces up the face, and across the superficies of which our road lies; but we have decided to camp out for the night on the lowlands, and negotiate the ascent in the morning. So the sheep herds have already halted the flocks in a sheltered meadow, bounded by, and partly enclosed in, the windings of a clear, babbling mountain stream, which is leaping onwards to add its contribution to the sluggish waters of

the Umgeni. As the sun sets behind the hills, darkness comes on apace, and soon the sheep clump up together and quietly settle down to rest on the soft sward, leaving us free to make our own preparations for the night ;—these are simple, and soon accomplished. The horses, knee-haltered, are driven into a bend of the stream ; while the Kafirs collect wood, and light camp fires on the outside line between the hills and the flocks, thus to check their scattering during the night, and guard, moreover, against any chance attack from some prowling jackal or stealthy leopard. The kettles are soon boiling, and venison steaks and partridges frizzing in the pans ; while the ruddy light of the crackling wood fires brightens up the veldt, and falls on the well-made, swarthy forms of the Zulus, also on culinary matters intent, and enjoying the while huge forums of Kafir beer, which some young ladies, arrayed in mere hints at garments not worth mentioning, have hospitably conveyed from a neighbouring kraal.

As the night advances, we roll rugs around us, light our pipes, and pass an hour, ere seriously preparing our saddles as pillows, in gossiping on many various topics, when old Joe Massy, a very famous South African hunter in his day, insensibly glides into a reminiscence of earlier times (for he is generally averse to speak of his own exploits), which I will narrate, as nearly as I can remember, in his own words :—

" Some years back I paid a visit to an old bachelor friend and ally of mine, who had given up elephant hunting, and settled down quietly on a thorn farm in the thickly wooded country which borders the Mooi River.

" The place was said to be a favourite haunt of leopards, or tigers as they are termed in the Colony, but Jem Neil held such in but mean repute ; and, as the place suited him, determined to stand his ground. The number of handsome tiger-skin karosses that adorned the homestead sufficiently proved his prowess, and that his right hand had not lost its cunning. But matters on my arrival were not flowing quite as smoothly as heretofore, for a wary, and probably aged, leopard had commenced a series of well planned and skilfully executed depredations on his possessions that completely baffled Jem's foresight and experience.

" In obedience to his sportsmanlike instincts, he had for some time attempted to hunt the animal down in the usual way, but, signally failing in so doing, was at last reduced, as he gloomily informed me, to resort to poison ; but this tiger's ways were not the ways of the majority of its tribe, for he declined to return to any half-eaten or slain carcass, and acting as his own butcher selected and killed the very best of the herd and flock. It is difficult to estimate the amount of damage and worry that a crafty brute of this sort can afflict on the farm, or the difficulty of guarding against its attacks. In this case Neil had been compelled, much to the detriment of his sheep, to confine them at night in a close shed, built of rough stone, and even this precaution proved ineffectual after a time. He took

me to examine the place, and faith, how the tiger managed to claw and drag a well-grown lamb (the usual victim) under the strong five-barred gate that closed the shed fairly puzzled me; though a narrow space had purposely been left open at the bottom for the setting of a spring gun, as yet however without success. The outward enclosures, though they also consisted of two roughly-built stone walls some five feet in height, did not present any insuperable obstacles in themselves; but as the shed and kraals were within a few yards distance of the dwelling house and Kafir's hut, it was astonishing that the tiger ever ventured on an attack at all. One day Neil on his return from town displayed a high steel trap made on the gin principle, and though neither of us placed over much confidence in its efficacy, we eagerly awaited an opportunity to use it. But the leopard had seemingly grown disgusted at the restraints placed upon his movements, and departed for happier hunting grounds, so we were about to allow the flock to sleep outside again in the cool summer air when the Kafirs reported another victim. And sure enough, on the soft beaten ground without the kraal we readily detected the spoor (track) of the tiger, as also the marks of its claws where it had climbed over the stone enclosures. Under this spot we carefully set the gin, concealing it well with earth in the usual manner, though according to precedent we hardly expected the animal to return for some few evenings. At about ten, however, on the following night, as Jem and I had finished our smoke and were thinking of bed, an excited Kafir rushed in, "Baas, baas! de teeger cot, de teeger cot!" Seizing our guns, which were lying on a rack ready loaded and capped, we ran out into the night. It was one of those densely dark moonless nights which has cost many of us a bed in the veldt, when the natural obscurity is increased by a thick veil of mist drifting down from the bush lands, and it was with difficulty that we even groped our way to the kraal gate. Perhaps the idea uppermost in our minds might be that a trapped tiger was of but small account, and certainly in anything of a clear night long practise had made us both tolerably sure of our aim, but now we felt that a new and unforseen difficulty had arisen. Jem called out lustily for a light, and the Kafirs presently appeared bearing a small lantern. Guided by its feeble rays we entered the enclosure in a body, and flashed the light on to the gin. There, in truth, crouching down by the trap, was a large leopard, its eyes gleaming wickedly through the darkness and apparently caught by the hind leg. With a low chuckle and half-suppressed, "So we've got you at last, my boy," Jem advanced, took a careful aim, and fired. The tiger, before motionless, now bounded up with a fierce roar that echoed wildly through the surrounding rocks, in its rush tearing up one of the stakes which secured the trap, and with desperate energy flung itself from side to side to wrench clear of the snare. I sprang forward, and covering the animal as best I could (rather a ticklish matter by the uncertain light) fired, with the only effect seemingly of increasing its fury.

"At this critical moment the Kafir who bore the lantern dropped it in a fright, and fled precipitately to his fellows, who had retreated without the walls. The light was extinguished by the fall, and we were left in darkness with the fierce creature. After repeated abjurgations from us both, one of the Zulus took heart of grace, and procuring a larger lantern, passed it over the wall of the enclosure on the end of a whip-stock.

"We now both advanced, and Neil raising his gun pulled the trigger. I saw the flash, I heard the report, and I can now recall the wild roar of mingled fury and triumph with which the tiger, freeing itself by a last desperate effort, flashed past me and sprang upon Neil.

"In the fitful light I could for an instant make out the old man, as with his gun clubbed he endeavoured to keep off the savage brute, the next they were lost in the gloom. Again they struggled into the narrow focus of the lantern, then disappeared as they rolled together on the floor of the kraal. I scarcely dared to fire, as the least mistake on my part might be fatal to my comrade; yet quick, immediate action was needful, for the old man's strength was ebbing fast. So bearing the lamp high aloft, and holding my gun pistol-wise, I approached the combatants. A chance movement of the leopard's as he gained the ascendancy exposed his body; I drew the trigger; the charge, a heavy one of slugs, passed through his loins, and with a low growl he loosened his hold and slunk away into the darkness.

"With the assistance of the Kafirs (who assured of the discomforture of the foe, had ventured forth) I carried Neil to the house, and though severely scratched and torn in the contest, he was soon in a fair way to recovery.

"The leopard was found dead hard by in the morning, and I think that the old man almost forgot his wounds in the pleasure of contemplating its handsome skin, which now hangs beside his many other hunting trophies; though indeed it was claimed in the first place by—now just guess who? Why the rascally Kafir who had dropped the light, on the plea that he had first discovered the tiger in the trap."

Q. Q.

Eccentricities of Great Men.

A SHORT while ago the editor of a Free State newspaper, published under the style and title of *The Express and Orange Free State Advertiser*, complained of a statement contained in the March number of the *Cape Monthly Magazine* respecting the treatment to which domestic servants are said to be liable in that well-governed country,—the Orange Free State. The statement, the editor said,

was untrue; and he wrote as if he knew all about everything, and expected everybody to bow down and worship the "brazen image" of his idolatry—the great Himself. He could not be mistaken; he knew the laws and customs of the country perfectly, and not only that, but he knew also everything that took place in the towns and villages of the Republic; and upon his honour as a Free Státer, nothing of the kind alleged ever took place. Coloured servants were better off than their employers, and no injustice was ever done to any of them. Having said this he rested, and waited for the next issue of the *Magazine*, in full expectation that in it he would find a full and ample recantation. The writer of the paper, the editor of the *Magazine*, the printer and his devil, and the publisher, would surely all go down on their marrow-bones and worship. The next number of the *Magazine* came in due course; its leaves were eagerly turned over in search of the anticipated acknowledgment of "Ik heb mis gehad," or "Ik vraag excuse," but after the most diligent search nothing of the sort was found, and our friend was astonished beyond measure. How is this, says he to one of his subs. who stood near; I *demanded* an apology, and hav'nt got one? Yes, sir, says the sub.; very true, sir. You did demand an ample apology, but you see, sir, this number of the *Magazine* was published on the first of April!

A certain pre-eminently great man paid a short visit to South Africa lately;—touched at Cape Town, Port Elizabeth, East London, Natal; galloped along the high road to the capital of the Transvaal, jolting over stone boulders and neck-or-nothing sluits at the rate of ten miles an hour; doubled back through the Diamond-fields and the Orange Free State to Port Elizabeth; jumped on board ship, popped out and in again in Table Bay; and then steamed back to England at full speed. Rushing about in this way, and darting in and out, he, in the course of about two months, acquired a better knowledge of South African affairs, its climate, people, laws, customs, habits, agriculture, manufactures, commerce, and all other subjects embracing everything, from the practicability of bringing down a star (the memorable "Venus") from the Heavens, to the price of a cabbage produced under difficulties in the wilderness. So great was this great man, and so thoroughly competent to acquire knowledge in a day which other people take years to obtain before they can satisfy themselves that they really *know* something, that before he had been a month in the country he commenced to teach—not exactly his grandmother how to suck eggs—but to preach to the people of this great country, and plainly to tell them that they were a lot of ignoramuses, were moving on in a wrong groove, and had been so moving for the last two hundred years. Take my advice, says this great man to the merchant princes of Port Elizabeth, abandon the mistaken course you are on, leave off importing merchandise and piling up gold, leave off encouraging diamond digging and such like vanities, and turn yourselves into "hardy fishermen;" then, and not

till then, will you be doing that which will make South Africa a great and a free country, and one fitted to be cast adrift by the mother-country, and to float on its own bottom. Depend upon it, I am right, says the great man, and you are all wrong. The merchant princes looked aghast, one at another, not quite relishing the idea of abandoning their snug and comfortable quarters, their club, and their smart wearing apparel, for rough boots and nor'-wester clothing, but still hesitated until one of their number, bolder than the rest, exclaimed "bosh!" and reminded them that once upon a time another great man had told the world that even nature was wrong; as it was quite wrong in principle for acorns to grow on big trees, and pumpkins on slight tendrils; yet, notwithstanding this decided expression of opinion by a most eminent individual, acorns continued to grow on trees and pumpkins on tendrils, and the world has not stopped turning round. I, for one, therefore, shan't turn fisherman; and lo! the great man departed, and the merchants didn't turn fishermen.

Well, after a time this great man got back to that tight little Island from whence he came, and where reside a goodly number of men, who having spent the best years of their lives in South Africa, and having, as they imagined, acquired a moderately accurate knowledge of the country, were still anxious to hear what the great man had to tell them about it, fancying it possible that he might be able to tell them something that they did not know; so they invited him to a great "spread" at a great hotel, and invited a great many great men to help him to eat the dinner, after which they expected him to make a great speech, and verily they were not disappointed. The great man made a great speech, and he told them a great many things that they did not know before. He told them that South Africa was a country not suited for poor men to live in, as everything was so dear; a country that could not attract immigrants from Europe, and so on; that a cabbage cost two shillings, a cauliflower seventeen shillings, and that other things were dear in proportion. This and a great many more similar "facts" were all told with a gravity suitable to the occasion; and all being new to the old Capites, astonished *them* greatly. There were a few among them who, having swallowed a good dinner, had no room left for the "facts," and were unable to gulp them down; and one bolder than the rest stood up on his feet and wanted to explain, but this was pronounced to be "unpolite," and the bold man had to sit down again without explaining. It was not the right thing, the "hosts" said, to invite a great man to a great dinner, and induce him to make a great speech after dinner, and then for some one to stand up and tell the company that the great man's speech was a "comedy of errors." So the great speech had to be allowed to go uncontradicted into all the great newspapers of the kingdom, and the result is that the great dinner and the great speech have done South Africa a great deal of harm! Had the bold man been allowed to speak, he would at least

have said something to counteract the great man's "notions" about the cost of food. He would have said, or might have said, that the average price of the best beef and mutton did not exceed sixpence a pound; best wheaten meal twopence a pound (outside price); that on the coast you can buy a hundred Cape lobsters (kreef) for sixpence, and a fish weighing seven or eight pounds for a penny to twopence. That as for vegetables and fruits, these are in many parts so plentiful and cheap that cows are fed on cabbages and cauliflowers, and pigs on Jerusalem artichokes, pears, apples, peaches, &c., &c., but this would not have been polite.

Among other wonderful things, not generally known, told by the great man, were "stories" about the laws and customs of the Republics beyond our borders. He had, by staying a week at the capitals of each of these States, made himself thoroughly acquainted with these, and was able to say from personal knowledge that no oppressive laws or customs applicable to coloured people existed in the Republics. There was an anti-squatting law, a vagrant law, and so on, but they were perfectly harmless, and indeed beneficial to the people to whom they were specially applicable. In the Cape Colony he had *heard* a white man say that whenever his coloured servant offended him, he up with his fist and knocked him down, but in the States he had *seen* nothing of this kind; and with this sort of twaddle the great Mr. Froude greatly entertained the great company for about two hours, and has since been entertaining the newspaper readers all over the world!

The two great men above-mentioned were agreed on this: that no laws, and no administrators of laws, existed in the Republics from which or from whom natives or coloured people ever suffered wrong. The laws and their administrators were admirable in every way.

Now let us see what a respectable gentleman residing at Bloemfontein, the Capital of the Orange Free State, has to say on the subject. The following letter, written by Mr. Hugo Schultz, was published in, and is cut from, *The Express and Orange Free State Advertiser* of the 6th May, 1875:

"NEXT DOOR TO SLAVERY."

Blomfontein, 26th April, 1875.

To the Editor of the *Express*:

SIR,—At various times the charge has been preferred that slavery is now and again practised in this State; and even in the British Parliament ministers have been questioned thereon from year to year, but, for want of evidence, this painful subject was at last allowed to drop. The writer of this candidly acknowledges that such charges, believing them to be utterly untrue, always aroused his greatest indignation, until only lately, a case came under his immediate observation, which is so evident that the same is herewith brought before the public. A native woman, mother of two children, married some years ago by the Rev. Mr. Scott in the Wesleyan Church to a native man, has lately been brought before the Court of our Landdrost on a charge of causing a disturbance of the peace in the Kafir station Waaihoek. The offence was a trifling one, such as occurs almost daily in native locations, and the punishment inflicted on the woman was transportation to

a farm some fifteen miles distant from Bloemfontein, there to do compulsory service in the family of a farmer. With a child on her breast, the woman was forcibly taken away from her husband and carried off in an open cart during a heavy thunderstorm.

The same woman had voluntarily contracted with me some time previously, as kitchen servant, for £1. 5s. monthly wages, besides rations, and her period of service had not expired when she was thus forced into compulsory service, without any stipulation, known to her, of whether or what wages she may be allowed to demand from her new master. The woman's husband immediately applied to Mr. Attorney Mathey to get his wife back again by legal process. The Rev. Mr. Scott likewise protested at the Landdrost's office, and I preferred my claim by reason of a prior contract, but all in vain. The answer which I got was literally this:—"I can't help it; I can't break the contract now;"—but my prior contract, still in force, entered into by perfect free will between myself and the woman could tyranically be torn asunder!! I am the more induced to make this abnormity of a deplorable tyranny publicly known, as such deeds of violence are committed under the very eyes of the Government, and lead directly to the question—What will be the end of such irregularities? Shall we quietly stand by and wait until some fine morning our own wives and daughters are torn from us and sent away to compulsory service, on some pretext or other against which there is no appeal?

I am,
Your obedient servant,
HUGO SCHULTZ.

[If the name of our correspondent were not a guarantee for the substantial truth of his communication, we would really not have believed it possible that compulsory service in the manner described forms still one of the punishments permitted in this Free State. We commend the case to the consideration of His Honour the President, and if such a law still exists, we trust the first act of Volksraad will be to expunge it from our Statute books.—Ed. Exp.]

The Editor of the *Express* says, if the account had not been vouched for by so respectable a man he would'nt have believed it; by which it may be inferred, that although the magistrate's office is but a few paces from the residence of the Editor, and the truth or otherwise of the representation might have been ascertained in a few minutes if the unfortunate husband, who is only a "zwarte schepsel" (black fellow), had been the informant, the Editor was prepared to disbelieve him! Why does not the free press of the Free State report regularly, as is done in other countries, the proceedings in the magistrates' courts? Is it because there would be too many cases similar to the one which Mr. Hugo Schultz has had the courage to bring before the public gaze?

By the "Convention," the Free State is bound not to permit slavery to be practised, yet many people entertain the opinion that the laws of the State specially applicable to coloured people entail upon those people a system of slavery, although the word "slavery" is not named in them. What is the difference between real slavery and the next door to it which Mr. Hugo Schultz proclaims? Chief among the crimes which real slavery legalized was the forcible separation of wives from husbands, husbands from wives, and parents from children. Has this not been done at Bloemfontein under another name? Here we have a *married* woman with an infant at the breast and another child at her residence, torn from her husband

and the eldest of her two children, driven away to a considerable distance, and there placed in forced servitude, because, forsooth, she had been accused of a slight offence against the peace at a native location! What, while the law under which this is done continues in force, is to prevent a similar charge being brought against the woman before her "contract" expires, and another "contract" being made for her by the Landdrost with the same farmer or some other farmer, and what indeed is to prevent this woman from being kept in perpetual servitude under the plea that the proceeding is not the practice of slavery but the due administration of *justice* according to law?

It is to be hoped that Mr. Schultz will keep his eye on this case, and also keep the public informed thereon; and it is to be further hoped that he will watch proceedings in regard to the child left behind. There is a law in the state which provides for the apprenticeship of "destitute" children, and it may be that the child will be held to be destitute now that its mother, who while at home was earning £1. 5s. a month, has been transported away into forced service and cannot provide or care for it, and thus another human being may be sentenced to what we think is rightly termed "Slavery in disguise."

P.S.—After the foregoing was written, the following letter and editorial remarks thereon appeared in the *Express* of the 13th May: both speak for themselves. The writer of the letter prides himself on having Mr. Froude in the same boat with him as an admirer of "the Free State treatment of the natives," but Mr. Froude was not aware of the existence of a law in the Free State which sanctioned treatment such as Mr. Schultz brought to light, for he has asserted in London that there was nothing like slavery in disguise in the Republics. It is to be hoped that neither Mr. Schultz nor the editor of the *Express* will be tried for high treason for exposing such deeds.

We publish in another column a letter from "Freestater," which touches the question raised by Capt. Schultz regarding compulsory service at its very root. The matter being now under consideration of the Government, we refrain from remarking further than that, as far as we are concerned, we do not blame the Landdrost if he only administers the Law, but we wish to know distinctly what the Law is, and that will no doubt be decided by the proper authority. Capt. Schultz's letter has, we are glad to perceive, attracted all the attention it deserves. To attack error and wrong doing is always a most unthankful business, and sometimes not without danger to those who have the courage to come forward in defence of right and absolute justice. The world is now as it was ages ago,—liberty of thought, freedom of speech, liberty of conscience, and impartiality of the Press means exactly such thought, such speech, such conscience, and such impartiality as pleases individual conceptions We have had ample proof of this before we even came to South Africa, and we are neither surprised nor disappointed at meeting the same tyranny under the cloak of liberalism on the northern banks of the Orange River. Still, for all that, right remains right, and wrong remains wrong. We will acknowledge and uphold right; we will expose and condemn wrong wherever we find it, remaining quite as calm to the nods of our friends as we are indifferent to the displeasure of those who happen to differ from us.

MR. H. SCHULTZ'S "NEXT DOOR TO SLAVERY" CASE.

To the Editor of the *Express*.

SIR,—In your last number appeared a letter under the above title, signed by "Hugo Schultz," which I can assure you disgusted many.

The remarks which you, Mr. Editor, thought proper to add, shows that you have taken Mr. S.'s production as good coin; and it would then appear as if the article in the *Cape Monthly Magazine* on "Slavery in the Free State" did not deserve such srrong language as you used against it some weeks ago

As an old Freestater, to whom its independence is dear, I would say that such statemants ought not to be published without authenticated proofs being produced; and I consider it my duty to put the real facts before you.

I carefully investigated the matter, and find in the Landdrost's *notulen*, that the woman in question had been brought up four times for using abominable language and disturbing the peace. The first time she was dismissed, with an admonition; the second and third time fines of 2/6 and 10/ respectively were imposed, and she was cautioned that if brought up again she would be placed under contract. This sentence was carried out when brought up the fourth time; which amounts to be a servant to a farmer, away from town, for the term of twelve months, and receive wages at 10/ per month, with board, lodging, and clothing. Her new master allowed her to come in the post-cart to Bloemfontein, to see her friends, and if she was overtaken by a storm (surely such things have happened to many of us), the Landdrost is certainly not responsible for this!

Nothing is known to the authorities of the Rev. Scott's protest against the sentence. Mr. S. must therefore—let me say—be misinformed. No doubt Mr. S. knows that if he thought himself or his servant wronged the Free State authorities are always ready to listen to any just complaint.

The inhabitants of this town have every reason to congratulate themselves upon having a gentleman at the head of the district like our present Landdrost, who keeps the natives in proper order, which is an improvement on the state of things existing under one of his predecessors, who preached to the natives, etc., but left them to their wicked devices. Then each head of a family had to act as constable, and free his house of drunken niggers. Yet our prison had no fewer occupants than now, though the town has doubled in size.

I consider the system of contracting disorderly natives excellent, and more humane than locking them up in miserable prisons, were their morals are not improved. Even a great man like Mr. Froude, admired the Free State treatment of the natives.

I am, Sir,
Yours,
FREESTATER.

R.

[We do not ordinarily care to insert controversial discussions on such subjects as these in the *Magazine;* but as the writer of the papers in recent numbers on "Native Labour" has been somewhat angrily criticised, both in the Free State and the Transvaal, we deem it right to afford him this opportunity for reply.—ED. *C. M. M.*]

Public Opinion.*

BY THE VEN. ARCHDEACON BADNALL, D.D.

I HAVE thought that it would be not out of harmony with the honourable traditions of this room, and, bearing in mind the auspicious and every way memorable ceremonial in which we were taking part on Wednesday last, not inopportune, if I should venture on this occasion to travel a little out of the beaten track of these annual addresses, and claim some small share of attention for a theme that concerns us at once as students, moralists, and citizens. The object of my address will be to set forth some of the principal conditions which shall most favour, shall contribute most directly to form and uphold a sound public opinion; although in order to reach that end, it will be necessary first to define, as far as I may be able, what we mean by public opinion. If to any I should seem too bold in venturing on a theme of so much interest, I would base my chief claim to indulgence on the fact that every successive year, as our political institutions acquire increased fixity, the importance of the duty resting on every citizen to contribute his full share to make public opinion what it ought to be, cannot fail to become more urgent. The founding of our new Houses of Parliament marks the beginning of an epoch in the history of this Colony, which will be successful or the reverse, will be for good or evil, according as it shall be characterized in the main by the strength or by the feebleness of our sense of public responsibility. If what I am going to say shall help, however little, towards our common happiness and well being, my purpose will have been achieved. That I have undertaken a task which I can only very imperfectly fulfil I am well aware. I know I may venture to ask for that reasonable indulgence which our community is not usually unwilling to extend to every well-meant endeavour for its good, and I shall be more than rewarded for the degree of anxiety that must ever attend the attempt to speak truthfully and profitably on a complicated subject, if any words of mine should happily encourage others, better equipped than I am, and with more claim to be listened to, to prosecute what I am now about to propound only in the barest outline.

Now, all here present may be safely assumed to be agreed that Society was ordained for the sake of society, for the sake of the multitudes who compose it, not of the select few who may happen to be its leaders, and to have attained, however honourably, the more prominent social positions. To which, let it be added, in the words of Mr. Burke, that "political arrangement, as it is a work for social ends," so only "is it to be wrought by social means. There mind must conspire with mind. . . . . If I might venture to appeal to what is so much out of fashion in Paris,"—I should say that I am still quoting Burke, and that my extract is from his reflections on the Revolution in France—"I mean to experience, I should tell you, that in my course I have known, and, according to my measure, have co-operated with great men; and I have never yet seen any plan which has not been mended by the observations of those who were much inferior in understanding to the person who took the lead in the business. By a slow but well-sustained progress, the effect of each step is watched; the good or ill success of the first gives light to us in the second, and so, from light to light, we are conducted with safety through the whole series. We see that the parts of the system

* This is the address delivered at the annual meeting of the South African Public Library on the 15th May.

do not clash. The evils latent in the most promising contrivances are provided for as they arise. One advantage is as little as possible sacrificed to another. We compensate, we reconcile, we balance. We are enabled to unite into a consistent whole the various anomalies and contending principles that are found in the minds and affairs of men."*

To resume the thread of my own remarks:—In the foregoing passage public opinion is not so much as once mentioned, but it would be hard to find a passage in any writer that would more forcibly suggest how ill we can afford to do without it. If it is for the good of all that all interests should be allowed for and attended to in a state, then it is also for the good of all that all interests should, as far as possible, be represented. But they cannot be adequately represented except as every member of the body politic is free to have his opinion and his voice, and if he thinks he has a grievance, and is ready to state it in a lawful and respectful manner, is sure of a respectful hearing. How else are complaints to make themselves heard; and without the power to complain, how are wrongs to be redressed? It may be for the shoemaker's immediate interest to assure his suffering customer that the shoe is an excellent fit; but he who has to wear it has the best right to insist that it pinches, if it does pinch. And all who undertake to make laws for, or to govern others, from the governments and legislatures of nations down to the directorship of a penny bank or a parochial club, are as the shoemaker; it is not in the nature of things that they should be beneficial, or even just, except as they habitually take counsel with those for whose sake they exist. And it is through public opinion only that this interchange of counsels is practicable, or even conceivable.

And yet public opinion is something more than a mere plurality of individual opinions. "Human individuals," says Martensen, are not personal atoms which have only their own individual duties, but they are organically combined into a social whole, where in regard to social duties they are solidarically bound, one for all, and all for one." † On this solidarity, this organic oneness of society, the same author (whom I may, in passing, be allowed to name as one of the profoundest, clearest, and best-furnished thinkers of our time on ethical subjects), proceeds to ground the unquestionable fact, that there is such a thing as a social conscience; a common responsibility, and obligation, and guilt; a destiny that may visit a whole people, so as to be felt by the whole people as a common destiny. A fact of this nature may not admit of being easily explained. There are unfathomed depths in the moral no less than in the physical world. But there are evidences quite on the surface indicating with no uncertain finger that the true bond of social and political life rests on some principle vastly more profound than the voluntary, separate, conscious consent of each one of a multitude of moral units. In illustration, take the instance of a panic—perhaps an unfounded panic—suddenly seizing an army of brave men. Who on Wednesday last could be insensible to the peculiar emotion generated, not simply by the circumstance that each person present happened to be one of a vast crowd, but by something quite different, namely, by the intuitive perception that each one was a component part of a great multitude *inspired for the time with one grand common sentiment?* Assignable to the same root, however deep one may have to dig to get to it, is the capacity of a people for forming a common or public opinion, an opinion which is not so much the *sum total*, as the *subtle fusion* of many minds directed to one point. I am not going to attempt an analysis of the phenomenon. I only say that, beyond doubt, there is in man's social nature some such susceptibility as that of which we have been speaking, and that its reality is being constantly flashed upon us experimentally in everyday life.

Now by adding what has been said last, however fragmentarily propounded, to what was said before, we obtain an approximate notion of what public opinion is. It is any opinion that suddenly or slowly, accountably or unaccountably, possesses any organized section of the human race on any matter affecting its own interests, or the interests of any portion, or any individual member of that section. The

* "Burke on the French Revolution," p. 203, (small edition.)

† "Martensen's Christian Ethics," p. 366–8. (Clark's Foreign Theological Library.)

capacity for it is founded in man's social nature, and the right to it in natural justice. Any measure that tends to repress it, as distinguished from regulating the expression of it, is of the nature of enslavement. And, with the same limitation, any measure that tends to undo restrictions that have bound it previously, is a measure of emancipation; is of the nature of the restoration of a natural human right, apart from which mankind are not free to run the course which their Creator has set before them.

But the same distinguished writer, whom I was quoting a few minutes since, remarks in another part of the same work, that there are those who "are so taken up with their theories about the rights of man, that they have totally forgot his nature."* And I am afraid it is the nature of us all to think more about our rights than our duties. Public opinion is constantly invoked, first, as if it were a known quantity; as if it were the ascertained opinion of ALL concerned; and next, as if any opinion that may happen to be widely entertained, were most probably, if not certainly, correct. But neither is that which passes for public opinion a known quantity; nor is the correctness or incorrectness of an opinion necessarily affected in the least degree by the number of persons who entertain it. The sun no more revolved round the earth in the days when absolutely everybody supposed that it did than it does now. Nor—to go from physical to moral and social truths—do we discern as yet more than just the first faint dawning of that day, when the intellectual culture and patience, and moral devotion to truth, required for the formation of sound opinion on the vexed and intricate problems arising out of interests more strictly and properly human, shall have established their joint reign over the hearts and minds of the majority. Human nature, then, and the actual moral and intellectual condition of mankind being what they are, it is not for the good of society to assume as true in the concrete what is conceivable only in the abstract, and to deal with facts as being other than they are. Since all that I am chiefly anxious to say turns on the distinction just pointed out, I shall be pardoned if I try to bring it out into somewhat clearer light.

1. First, public opinion, or that which popularly passes for it, is not a known quantity. In the present imperfect state of the world, it is not even an ascertainable quantity. One would almost fancy sometimes, palpable as the fallacy is the moment it is stated, that any opinion is believed to become public opinion from the bare circumstance of its being anonymously published, and so issued to the world as not the opinion of any one person, or class of persons, in particular. I shall have occasion presently to refer to our manifold obligations to the press, and the indispensableness of a free press, as a chief factor of healthy public opinion. I must so far anticipate that topic as to make this the place for saying that the relation of the press to public opinion is for the most part conceived of very vaguely, and that while in some respects that relation can scarcely be over-valued, in other respects it appears to be estimated, or, rather, dreamed about in that negligent and misty manner which is sure to lead to error. For, after all, the opinion of one section of society is nothing more than the opinion of that one section; nor does a writer, because he is unknown, or because it may be on the whole a desirable point of etiquette to treat him as unknown, represent the minds of other people better than if he were known. He may influence other people's minds more effectually through being unknown; the anonymous writer may be a more powerful director of opinion; an ably conducted newspaper, owing to its impersonal character, has the stronger tendency to consolidate and give confidence to a party; but so far as the press undertakes to be an exponent of opinion, it is even misleading, if the veil of anonymousness under which it is generally (and I venture to believe, on the whole, beneficially) conducted, favours the illusion that, on that account, it represents a wider and more exact acquaintance with the wants, or wishes, or thoughts of others.

So far I have used the term Public Opinion as being one that everybody accepts, and that could be dispensed with only by resorting to awkward circumlocutions. But it is obvious that, like many other terms in political and moral science, it

* "Burke on French Revolution," p. 77.

stands for what *ought to be*, rather than *what is*. In a certain class of cases, where the point inviting opinion is of the simplest possible description, like some of the questions mooted in the Comitia in the beginning of Roman history, we may readily understand how a very large body of persons may quickly arrive at unanimity, or, at any rate, understand clearly why they differ. For in such cases the question often stands in the form of a simple alternative, and the merest instinct of the lowest human intelligence is all that is required for a decision one way or other;—the prospect of obtaining some material advantage, or of escaping some considerable inconvenience, powerfully helping, most likely, to determine the decision. But the enormously larger proportion of the questions that appeal to public opinion are not of that simple character. Many of them are highly composite questions, springing out of conflicting, and, it may be, tangled interests, involving often a multitude of data, and intricate processes of reasoning. It is only by singling out from such problems just some one solitary element, and making it do duty for the whole, carefully keeping out of sight the real difficulties, that they are commonly made even presentable to the public as all, whose instinct often tells them that they have no option but to wait for guidance. While in such cases, the more competent a man is to supply guidance and form a judgment, the more time, generally speaking, does he ask, the more deliberately does he proceed. Frequently the most useful opinion that can be formed is a negative opinion, an opinion which is substantially a protest against any opinion at all being formed, at least for the present. But there are some special difficulties in the way of the more thoughtful and cautious section of society making a negative policy respected as it deserves to be; and there is always the danger of a noisy and persistent minority meantime receiving an attention wholly disproportioned to their claims. There can be no division lists of public opinion. The guesses made in the absence of proof must generally be of the most crude description, with the additional evil that party spirit and prejudice are ever on the alert—such is human infirmity—to turn the inevitable uncertainty to their own purposes.

2. But not only is public opinion an unknown quantity: if a given opinion were ascertained never so certainly to be the opinion of nine out of ten of the persons concerned, would that circumstance by itself be any certain measure of its correctness? This is a point that requires some little attention. We need not hesitate to accept the dictum of Aristotle (Rhetoric Lib. 1, p. 3, Becker's Edit.), that "mankind have a considerable natural aptitude towards what is true, and in the majority of instances hit the truth." This is illustrated not only by the effect which mathematical demonstrations have upon us, but by the manner in which the merits of a practical question are sometimes seized instantaneously by very promiscuous assemblages. I was told the following story by an eye witness on the occasion of the first grand review of volunteers in Hyde Park A large number of Londoners of the lower orders, including a crowd of sharp-witted London lads, were assembled between and in front of the series of grand-stands constructed along well nigh the whole length of Park-lane for the accommodation of the upper ten thousand. During the rather tedious interval that preceded the review, the London boys beguiled the time, after their wont, by keeping up a running fire of innocent witticisms on every little passing occurrence, with a flying shot now and then at any one in the crowd whose appearance or proceedings invited special notice. At last a rather pompous very well-dressed gentleman on one of the stands was unwise enough to become angry at what was only meant as fun, and to call the crowd to order in language more strong than polite. On which one of the little ill-clad urchins picked up a fragment of dirty-white paper that had served as part-wrapper to a sandwich, fastened it into a split at the end of a stick, marched gravely up to the stand, and pointing with one hand to a very little boy in his neighbourhood, with the other presented the bit of paper to the irascible gentleman, calling out at the same time in the shrillest treble, "I say, Sir, that little boy sends you his CARD!" Now in that instance public opinion, or as much of it as the case admitted of, went to the right side like a flash of lightning. A simultaneous roar of hearty laughter, on the stand, as well as off it, at once proclaimed that the ill-dressed little lad, with his mock challenge, had the

best of the controversy; that anger was out of place; and that if any one was disposed to be ill-tempered, good-tempered quizzing was the best way of putting him straight. But I quote this little incident mainly because it helps to illustrate the sort of cases in which public opinion is often as just as it is prompt. Where there is a call for a display of feeling rather than for the exercise of reflection and judgment, the hearts of a very mingled crowd will sometimes beat as one, and as they ought to beat. I once saw a poor, ragged, famished-looking boy rush into a confectioner's shop in a chief and crowded street in Liverpool, help himself from the counter—of course without paying—to a handful of buns, and walk out again, eating as only, I suppose, those do eat to whom hunger has at last become a sort of agony. This he did in the sight of a large number of people. None stopped him; none reproved him. One general exclamation of deep pity followed him as he went. And as any instance of manifest suffering appeals at once to the general sentiment of pity, so does an instance of manifest injustice or cruelty appeal at once to the general feeling of resentment, or a manifest instance of heroic courage to the general sentiment of admiration. But if the case is not one within everybody's immediate observation, the danger of a perversion of judgment begins at once. Facts about which there needs not to be any misunderstanding, and about which there ought not to be the possibility of two opinions, are yet often made the ground of appeals to the passions of the multitude that are mischievous and misleading in the last degree. And nearly all the more difficult problems of moral and political science are attended with this peculiarity, that they present themselves to us in the concrete, not in the abstract; they first come before us not as questions of science, but as practical questions, bound up with the wants or interests, the wishes and the passions of human beings; so that, in trying to solve them, we encounter human selfishness, human passions, human feelings, at every turn. Our interest even in so dry a matter as a question of taxation is different in kind from our purely intellectual interest in a proposition of Euclid, and a degree of confidence in the processes of the intellect which would be natural in the one case would be wholly unjustifiable in the other. Such is the prevalence of prejudice, such the brute-force of ignorance for destructive ends, that even scientific truth has had to hide itself before now from the violence of the multitude as its best chance of life. Those who have read the "Last of the Barons" remember how, with the cry of "Death to the Wizard!" a London mob wrecked the house of the inventor of the first steam engine. The novelist, whether he was literally true to fact or not, was at any rate true to human nature when he wrote that page. A crowd once under a false impression as to any thing in which they believe they have an interest,—once under the impulse of a passionate sentiment,—is difficult to undeceive and guide aright in proportion to the greatness of its numbers, especially if, as generally happens, the truth can only be vindicated by an appeal to reason. And for substantially the same reason, although in a less degree, it is practically futile to expect that the great majority of men will ever in the first instance bestow on those more complicated human questions that underlie all our gravest human interests, that amount of care, and conscientious and otherwise adequate reflection that are indispensable for the solution of them. I speak of mankind as they are. Mental indolence, moral cowardice, chronic indifference to the finer distinctions between true and false, just and unjust, right and wrong, selfishness under a thousand forms, now and then too a more or less creditable consciousness of unfitness for the task of judging of things which there has been no previous endeavour to understand,—all these things arrest the formation of opinion; they induce men to lean idly on one another, to borrow one another's prejudices, and substitute party cries for the honest labour of independent thinking; in short, the bare consent of any given number of human beings, apart from the consideration of that to which they consent, and the circumstances under which their consent is given, has hardly more to do with the goodness of their cause than has the numberlessness of a swarm of locusts with the desirableness of their errand. On the contrary, the worth of an opinion may be in an inverse ratio to the number who entertain it. Some present may remember the following passage in De Quincey's paper on

secret societies: *—Once on a time he "had heard only of secret societies that were consciously formed for mischievous ends. Soon he read of others . . . that watched over truth dangerous to publish or even to whisper . . . The secrecy, and the reason for the secrecy, were alike sublime. The very image, unveiling itself by unsteady glimpses, of men linked by brotherly love and perfect confidence, meeting in secret chambers, at the noontide of night, to shelter, by muffling with their own persons interposed, and at their own risk, some solitary lamp of truth,—sheltering it from the carelessness of the world and its stormy ignorance;—that would soon have blown it out; – sheltering it from the hatred of the world;—that would soon have made war upon its life;—all this was superhumanly sublime." Everybody perceives at a glance what society was in De Quincey's thoughts,—a society whose entire genius is averse from secrecy, that noway courted darkness, except that it might *exist*, in order, at the earliest possible moment, to emerge into daylight again. But my citation is thus far apposite; it reminds us that that ONE society, which in the vastness of its philanthropy, and in the multiplicity of the benefits that it has poured over the world, towers as much above all others as the heaven is higher than the earth, was once obliged that it might save its life to withdraw itself from public opinion. What more affecting monument could we have that the difference between public opinion and "stormy ignorance" rests not necessarily in the number of persons who may represent them, but in another and very different ground of distinction set forth in a lesson of Divine Wisdom with which all are familiar: "And five of them were wise, and five were foolish?"

But it may be said, and with much show of justice, "If public opinion is so beset with liability to error, how are we to account for the consciousness instinctive with us all, that nevertheless there is something in it to be prized and respected?" The explanation is not far to seek. However valuable or indispensable public opinion may be, it is not valuable for the reasons commonly put forward; it does not operate in the manner popularly assumed. Opinion, private or public, is never necessarily identical with truth; but as the connecting link between the practical reason in man and all true conclusions in practical matters, it is indispensable. It is this distinction that is too often overlooked.

An address such as the present does not afford the opportunity of dealing with the logic of opinion and belief,—taking belief in the sense in which it is strictly cognate to opinion. A subject of that nature must be treated technically, and at some length, or let quite alone. It is, however, necessary to observe that sound opinion as much implies valid reasoning as a mathematical problem implies it,—the difference consisting in this, that the reasoning process is employed in the two cases about two different kinds of matter; that in the one case uncertainty is excluded; in the other, every variety of uncertainty is admissible down to the lowest degree of the barest possibility. If the three angles of a triangle are not demonstrated to be together equal to two right angles with absolute certainty, the demonstration fails utterly. But a medical man may be fully justified in the opinion that a particular patient is on the point to die, who yet may recover and live for twenty years longer. Or a lawyer may be justified in giving and receiving a fee for a legal opinion which a court of justice may be justified in overturning within the next twenty-four hours. And this is not the fault of opinion. The weakness or the peculiarity lies with the nature of the matter with which opinion has to do. It is probable and contingent matter, and that only, that furnishes the sphere within which it is the business of opinion to exercise itself. It appertains to the discipline of life, it specially belongs to all matters distinctively human, that it should be so; and therefore within that sphere it is only through means of opinion, or more strictly through means of those modifications of the reasoning processes of which opinion is the legitimate result, that truth is anyhow attainable.

For here, let me add, that though opinion can never lay claim to mathematical certainty, yet opinion may and often does conduct to a degree of certainty just

* "De Quincy's Works," vol. vi., p. 244 (Author's edition).

as valid as if it were mathematical certainty, for every purpose of determining our conduct. Indeed, this is the meaning of the term "moral certainty;" that is, certainty of such a kind as removes all ground of rational doubt as to our *duty* in a given case. So that truth is quite as strictly the scope of opinion as it is of mathematical demonstration or scientific research; and though experiment, and experiment alone, may be the ultimate test of opinion, as it constantly is of scientific theories, yet unless opinion has gone before it is impossible that any result can be reached to which the test of experiment can be applied.*

And what is thus far true of opinion in general is not less true of what we call public opinion, a term expressive principally of the conditions under which truths affecting large and wide interests are gradually established at once by the combined action and mutual attrition of a multitude of minds. What is not sufficiently kept in mind is the great range of the process by means of which public opinion ordinarily effects its results. It never can be predicted of any one of the various truths after which public opinion is at any time feeling its way, that it is sure to be reached within some assignable period. Just as a dozen highwaymen may suddenly overpower a traveller, and strangle him, so may some of the countless legions of error, and of the passionate and selfish prejudices which are the chief instigators of error, suddenly encompass, and for the time (possibly an indefinite time) overwhelm some mighty prolific truth which had been painfully travailing towards the birth for centuries. Such are the daily mysteries of our present earthly condition. Present success is no measure of what is right. The immediate acceptance of an opinion is no criterion of its correctness. Truth has often seemed weaker than untruth for the moment. But "the stars in their courses fought against Sisera;" and Deborah, when she sang that song, prophesied for all ages. A falsehood, a wrong, an injustice, is out of tune with nature. Resistless as the rising tide is the eternal majesty of truth. And as opinions gravitate towards truth, or are repelled by it, their ultimate fate is already sealed; —they will live to conquer, or they will fall and rot like autumn leaves No man who has that hope in him can think carelessly of public opinion.

And now I have endeavoured to do two things. I have tried, first, to clear up in some measure the meaning of the term "public opinion;" to rescue it from some of the confusion with which it is too commonly enveloped: and secondly, I have at the same time endeavoured to vindicate not only its importance, but its indispensableness to the highest interests of mankind. In doing this, I have in some sort anticipated my last topic; that is to say, I have incidentally suggested part of what I shall next present in a more methodical form, and as briefly as I can.

1. I now proceed to state some of the principal conditions needed for the formation, indeed the possibility, of a sound public opinion. First among these I will name liberty of speech. Men cannot think to any purpose while they are not free to utter their thoughts. *Ratio* and *oratio*, reason and speech, are but two parts of one and the same God-like prerogative in man, and if any number of mankind are trained to speak like slaves, few indeed will those amongst them be who will be able to think like freemen. That there is no counterbalancing danger in free discussion, no sensible man would assert. Mr. Grote,† the historian of Greece, whose sympathies will be allowed by every one to be sufficiently democratic, in speaking of "the unmeasured and unsparing licence of attack assumed by the old comedy" of Athens "upon the Gods, the institutions, the politicians, philosophers, poets, private citizens specially named, and even the women, whose life was entirely domestic," fully admits the demoralizing and "degrading influence" of it. As to attacks on public institutions and public men, he would treat those more indulgently, "inasmuch as that measure of aggressive criticism which is tutelary and indispensable, cannot be permitted without the accompanying evil, comparatively much smaller, of excess and

* "The Rhetoric of Aristotle," Lib. i. (Introductory chapters). "Thomson's Outline of the Laws of Thought" (Part iv., Applied Logic.)

† "Grote's History of Greece," Vol. vi., 8 vo edit., pp. 34—36

injustice." But, he adds,—and in view of the eventual downfall of Athenian greatness, if not of the entire Greek character, the remark seems to me full of warning,—that "excess of bitter personality is among the most conspicuous sins of Athenian literature generally." Still, what Hallam* says of the Press is equally true of every form of public opinion,—"It cannot be said to exist in any security, or sufficiently for its principal ends, where discussions of a political or religious nature, whether general or particular, are restrained by too narrow and severe limitations." Every more grave abuse of liberty of speech, like any other abuse of what is most useful and best, is certain to entail, sooner or later, directly or indirectly, some forfeiture of liberty. But "there are only two modes of governing society,—either by persuasion or by coercion."† And liberty of speech is sure to develop itself in every community in a steady ratio to the pace and measure according to which the governmental power, whatever be the form of it, recedes from the principle of coercion, and addresses itself to all that is worthiest and best in man's reasonable nature.

It is chiefly as a support and foremost representative of this liberty of speech that every free community is interested in the liberty of the press. Technically, "the liberty of the press," Hallam tells us, "consists merely in an exemption from the superintendence of a licenser." But the only liberty of the press that can be of real service, must be such as is grounded in the general consent of the public subject to such limiting interpretations as may be afforded from time to time by the law-courts of that most indefinite of all indefinite laws, the law of libel. As I have already ventured to say, the value of the press as an exponent of opinion, —I speak chiefly of newspapers, but by no means of them alone,—appears to me to be misconceived. The press is amply entitled to the credit attaching to criticism as criticism:—criticism, too, which is generally independent in relation to the object of the criticism, is often instructive and acute, and not more open to the charge of partiality than are mankind in general in their discharge of one of the weightiest and most difficult functions attaching to them,—the distribution of praise and blame. While, again, the value of the press as a vehicle of information, and chronicler of the data on which it is well that public opinion should be formed, could be estimated duly only if, retaining the heart of a free people, we were to be subjected suddenly to a forcible suppression of it. It is, however, in its function as the foremost representative and maintainer of liberty of speech on behalf of the whole body politic that the press has fairly won its title of a fourth estate of the realm. To say that it is itself open to criticism is to say no more than that it is a human institution. Hallam,‡ speaking of the press of England some forty years ago, deems it "justly" liable to the charge of "licentiousness." None the less, I am bold to say that an average modern newspaper is a more wholesome and more effectual guarantee for liberty of speech and thought than the best comedy that Aristophanes ever wrote, and may be justly and gratefully regarded as a necessary constituent of that civil freedom, apart from which an Englishman would hardly consider life itself worth the having.

2. But it often happens that those who are readiest to be indignant at the supposed denial of a right are among the most blind to the duty of exerting it. Society suffers in free countries from the large number of those who, not undervaluing civil freedom or public honesty, are too content to hand over the maintenance of the last and the employment of the first to any that will undertake them, provided they themselves be exempted. If they have opinions, they are careful not to express them, unless it be in a whisper. They are glad that the vessel of the State should be navigated cleverly and safely, but for themselves they are content to be passengers. It is matter for deep regret that among those who shrink thus sensitively from all public responsibility are to be found, almost always, some of our ablest, most conscientious, most thoughtful men; and not unfrequently one restraining influence is their genuine modesty. They cannot

* Constitutional History of England, Vol. ii, p. 330.

† Grote, Vol. vi, 8vo. Edit. p. 61, note. ‡ Const. Hist. Vol. ii, p. 331.

persuade themselves that they have as much in their power as they have; that a sensible and earnest man, who shows he understands his subject, will generally be able to modify the opinions of all but the most ungenerous opponents, even if he cannot turn them; and that such is the inherent power of truth, that even an ungenerous opposition will sometimes bend before the moral pressure of manifest conviction. But the results of our actions are comparatively speaking beyond our power. What is ever to be lamented is the supinely abdicating any duty of good citizenship; the looking on in silence when we ought to speak; the leaving others to fight a battle which is as much ours as theirs; and throwing it into the power often of a small minority to proclaim their voice as the voice of the public. It were more patriotic to bear in mind that the country which affords us an honourable livelihood, and protects us in the pursuit and enjoyment of it, has a natural claim on the best service we can render it, even at some sacrifice of our present ease and preferences. Therefore, second among the conditions of everything good, let us place a high-souled, self-denying, widely diffused patriotism.

3. In the next place we want a higher intellectual culture,—not more intellectual smartness, but a higher culture, with its necessary accompaniments of intellectual thoroughness, intellectual modesty, intellectual patience. We want such culture as shall refuse to tolerate "the conceit of knowledge without the reality;" specially do we want it on those subjects which most directly concern man as man, as a moral being and a member of society. Speaking as I do within the same walls that witnessed a few weeks ago the inauguration of our University, I may the more courageously lift up my voice on this topic; I may the more boldly deprecate the continuance of the want which the University was founded to supply.

All who are acquainted with the history of Socrates are aware that the almost universal prevalence of "the conceit of knowledge without the reality" was, in his judgment, *the* malady of the busy-witted age and race of which he was the brightest luminary; and that it was nothing else than the aversion he provoked by his unceasing efforts to awaken the clever Athenians to their ignorance of what it most concerned them to know, that eventually cost him his life. Hear Mr. Grote's account on the general purport of the Socratic teaching: "There was no topic upon which Socrates more frequently insisted than the contrast between the state of men's knowledge on the general topics of man and society, and that which artists or professional men possessed in their respective special crafts . . . Take a man of special vocation,—a carpenter, a brazier, a pilot, a musician, a surgeon,—and examine him on the state of his professional knowledge, you will find him able to indicate the persons from whom and the steps by which he first acquired it; he can describe to you his general aim, with the particular means which he employs to realize the aim, as well as the reason why such means must be employed, and why precautions must be taken to combat such and such particular obstructions; he can teach his profession to others; in matters relating to his profession he counts as an authority, so that no extra-professional person thinks of contesting the decision of a surgeon in case of disease, or of a pilot at sea. But while such is the fact in regard to every special art, how great is the contrast in reference to the art of righteous, social, and useful living, which forms, or ought to form, the common business alike important to each and to all! On this subject Socrates remarked that every one felt perfectly well informed, and confident in his own knowledge,—yet no one knew from whom or by what steps he had learnt; no one had ever devoted any special reflection either to end, or means, or obstructions:— . . . every one knew for himself, and laid down general propositions confidently, without looking up to any other man as knowing better;—yet there was no end of dissension and dispute on particular cases." To this Mr. Grote presently adds: "The phenomenon here adverted to is too obvious, even at the present day, to need further elucidation as matter of fact. In morals, in politics, in political economy, on all subjects relating to man and society.—the like confident persuasion of knowledge without the reality is sufficiently prevalent; the like generation and propagation by authority and example of

unverified convictions resting upon strong sentiment, without consciousness of the steps or conditions of their growth; the like enlistment of reason as the one-sided advocate of a pre-established sentiment; the like illusion, because every man is familiar with the language, that, therefore, every man is master of the complex facts, judgments, and tendencies involved in its signification, and competent both to apply comprehensive words, and to assume the truth or falsehood of large propositions, without any special analysis or study."*

I shall not offer my audience the affront of appearing to suppose them less alive than myself to the surpassing interest of the foregoing citations, or to the instruction which they convey to us all. Public opinion cannot be sound unless it be enlightened. It is not enlightened unless it advance cautiously, with a lively regard to the possibilities of ignorance, in a spirit of implacable hostility to all sciolism and affectation of universal knowledge, and with a consciousness of the special danger of the "illusion" glanced at by Mr. Grote, the illusion that we necessarily understand our moral, political, and social interests, for no better reason than because everybody without effort can say something about them. I trust that in future years, when the University of the Cape of Good Hope shall have almost forgotten the days of its youth in the strength and beneficence of its maturity, it may be able to count among the number of its benefactors some honoured name or other that shall have shown as much care for ethical and mental science as it is the tendency of our time to bestow on mathematics and physics. It would ill become one whose loss it is not to be a mathematician to seem to say that our physical and mathematical knowledge is in the slightest danger of being in excess of our wants. But I wish our respect for those departments of learning were better balanced. I grant that the moral and mental sciences require a certain ripeness and general preparedness of intellect for their successful prosecution. But no branches of learning affect us more surely or permanently, or more certainly percolate down to the lower intellectual strata, and gradually spread themselves among the masses. At any rate, I may be pardoned a pious wish which flows naturally out of the subject we have been considering; for how can public opinion be healthy where it is forgotten that "the proper study of mankind is man?" When the *literæ humaniores*, those branches of learning that properly concern man as man, are postponed to the investigation of the conditions of animal life, and the laws of the material universe?

4. The one universally necessary and most comprehensive of my "conditions," I have reserved to the last. Freedom of speech, a high standard of patriotism, a trained and informed intelligence must be united in any community that would be capable of sound public opinion. I speak, of course, of what is ideally requisite for the attainment of an ideal good. But, as I have already reminded you, what *ought to be* is no measure of *what is*. I have expended perhaps superfluous care in showing that the value of opinion stands in no fixed ratio to the numbers who may happen to profess it. What, then, is to sustain a numerical minority, with sometimes the world against them, in urging an opinion whose only recommendation is, as they believe, its truth?—an opinion concerning which the best that the most sanguine can hope for it is that in days to come (it may be in days far distant) it may begin to obtain recognition? What has been the Divine impulse that in every age of the world, from Socrates downwards, and long before Socrates, has nerved our religious, our political, our scientific martyrs to endure unmoved not only the world's ridicule and active opposition, but what is by far the hardest to a generous nature, the disheartening unbelief, the freezing apathy of half friends? It could only have been the sublime persuasion, which, like the planets, has been sometimes nearer to the sun, sometimes further from it, that a mightier and more trustworthy influence was abroad than the influence of human opinion; that the God of the Universe is not "the God of Deism, who sits idly behind the stars, and once for all has abandoned the world to itself and its own law of development, like Homer's Zeus, who has departed to Æthiopia;"†

* Grote, Vol. vi, pp. 128—132. † Martensen's Christian Ethics, p. 13.

that it is not truth that is built on opinion, but opinion that draws the marrow of its life from truth; that all that is false, whether in thought or action, however it may seem to prosper, is "condemned already;" that all true opinion has God and God's Universe on its side. A religious confidence in the final victory of truth, working hand in hand with a tender and practised sensitiveness to the hatefulness and shortsightedness of all untruth, is the prime condition, not always in the order of facts, but always in order of importance, of all sound public opinion. "Religious confidence," I say, not as denying that man's moral nature supplies a basis of ethical science independently of revelation, but because that confidence in the ultimate triumph of truth and right which dares to brave the world, whether it exist in its lower or lowest degree among the heathen, or in its most assured and enlightened measure in the Christian, is essentially in every instance the fruit of FAITH! A community that has cut itself adrift from the anchorage of that hope has no future before it to be desired of any man. It is a public body whose common conscience has lost its true point of attraction. Its opinions, therefore, are as the hollow, whistling wind. They may serve to twirl the weathercocks, and blow the dust about; but they have ceased to deserve reliance or respect. They are directed to no ennobling end. They are governed by no principle. Thenceforth they have quicker affinities with the crooked ingenuities of falsehood and low expediency than with the honest speech and single aims of toiling, struggling truth. Only one lower degradation is reserved for such a condition of public opinion—that it be open to a bribe.

Wholly different is the case of a community that continues to be growingly, however gradually, receptive of truth. Selfishness, injustice, and falsehood will not die out of it. Everywhere alike, the wheat *with* the tares is the very best that can be looked for in this life; and not even that qualified harvest without careful sowing, industrious tending, patient waiting. But so long as a community is growing in its sense of common responsibility and common duty; so long as a people is becoming penetrated by the religious conviction that they are not their own to do what they like, but that their common acts ought to, and will entail moral consequences, and that all things are moving steadily to a bar of judgment more tremendous than that of human opinion;—so long it would be difficult to say what good thing may not be in store for such a community, or what service it may not render to mankind. And the vigour and honesty of its public opinion will bear a steady relation to its general advancement. Its conscience "will bear testimony to itself through public opinion,"* and the exercise of that public opinion will be a constant quickening to its conscience.

The New Art Gallery.

WE are unable in the present number to do more than notice the fact that the South African Fine Arts Association has entered upon a new career with the brightest prospects. The Gallery, opened by Sir Henry Barkly on the 21st April, is one admirably adapted for the special object in view. The site has but one drawback at present—it is not quite central enough. But when the street leading past the New Houses of Parliament and the Public Library is opened, we cannot imagine a more convenient situation. We shall then have the Botanical Gardens in the centre, with the South African College on one side, Government House and the New Houses of Parliament on another, the Public Library and Museum on the third side, and the Art Gallery with the different schools in its neighbourhood form-

* Martensen.

ing the fourth. If the proper authorities could see their way to the erection of a light iron railing with a handsome gate opposite the Art Gallery in lieu of the present hideous blank wall which now hides the Gardens from the view of the profane vulgar, we should find that very soon New-street would become the handsomest street in the City. The verdict of the public on the New Gallery since its opening has been one of unqualified approval. On all sides we have heard nothing but expressions of surprise that so much has been effected with the comparatively small sum placed at the Committee's disposal, and warm congratulations at the success which has attended their efforts. The originators of this Association must themselves wonder at the happy result of the movement set on foot only four years ago. For twenty years before that time lovers of Art had sighed in vain over the want of a permanent Art Gallery, and wished and hoped that the day would come when South Africa should no longer be behind the rest of the world in this respect. Frequent Loan Exhibitions were held, but the difficulty and expense of hiring and fitting up rooms damped the ardour of the promoters, and the interest raised for a time in the mind of the public passed away with the dispersion of the pictures. The success of the present movement is due to the fact that it was begun with the determination that it should succeed. The originators made up their minds that however small the number of members might be, they should keep up the Association. The idea was that an occasional exhibition might be held—but that the principal object to be kept in view should be to have a body who might be the recognised custodians of works of art presented to the public. There were hopes that the funds of the Society would admit the purchase of a picture now and then, which might find a home for the time in the Public Library, or some other public institution ; but the erection of a gallery for the purpose was only seen in the remote distance. Above all things, it was determined not to go into debt. The Rules, however, were drawn up, so as to show plainly that it was intended on this foundation to erect a large and useful Institution. It may be mentioned in passing that the first gift to the gallery was presented by Mr. E. J. Jerram, within a week after the first preliminary meeting ; so that the two pictures in the present Exhibition, 193, English Channel by Taylor, and 234, Burlington Quay by Chambers, had, for a very long time, the honour of being the Art Gallery of South Africa. When the proposal to form the Association was laid before the public, it met with such hearty support, that the subscribers felt justified in commencing at once to carry out its objects on a much larger scale than was at first contemplated. The arrival in Table Bay of the Royal Academician, Mr. Lee, just as the Exhibition of 1871 was about to open, enabled the Committee to exhibit a valuable collection of the works of that eminent landscape painter. These attracted so much attention and admiration that the cause of the Association was most materially advanced. Mr. Lee himself took a kindly interest in its success, and gave many valuable hints and suggestions. The

Association in its first year sustained a heavy loss in the death of Mr. T. B. Bayley, who, for years, had been almost the only liberal patron of Art in the Colony. But the warm appreciation of the objects in view induced that gentleman to make such provisions in his will as would enable the Colony at once to obtain a valuable nucleus for its fine arts collection. He bequeathed to trustees the amount of £500, and the greater part of his excellent collection of Paintings to be made over to the South African Fine Arts Association, if within eighteen months a further sum of £1,500 should have been raised for the erection of a suitable building, and should the Association still merit the confidence of the public. The Colonial Legislature voted £750 towards this purpose, and by private subscriptions in Cape Town, a further sum of £800 was raised. Thus the first part of the conditions was fulfilled, and the trustees, we suppose being satisfied as to the latter part, handed over the Bayley bequest to the Association. It was with this amount of little more than £2,000 that the Art Gallery just opened has been purchased, fitted up, and paid for. It is now dependent entirely upon the subscriptions of its members, and the amounts received from the small sum charged for admission to non-subscribers. This income barely suffices to meet the necessary expenditure for keeping the Gallery open, and can leave no balance for adding to the collection, or further improving the building. The Institution is a public one. It holds in trust for the public property considerably over £3,000 in value. The first Parliamentary vote of £750 has therefore been well invested. But the Government ought to assist in further developing the movement. A comparatively small annual vote would enable the Association to throw open the doors of the Gallery to all free of charge—and would assist it gradually to increase its usefulness by adding year by year either original works or good copies of celebrated paintings, and casts of famous works of sculpture. The hint given in Sir Henry Barkly's reply to the address presented to him on the day of the opening is so plain, and the whole reply so excellent, that we commend it to the careful consideration of the Executive. His Excellency said:—

"I thank the Committee of the South African Fine Arts Association for this address. As President of the Association, it gives me much pleasure to attend at the opening of its new Gallery; and having accompanied it in its wanderings, I may be permitted to congratulate it on having at length acquired, thanks to the munificent bequest of the late Mr. Bayley, and the liberality of Parliament, so commodious a home. I quite agree with you, however, that the inauguration of to-day ought to be looked on as no more than a commencement of its plans, and that the Association may well aspire to something more than a loan exhibition of works of art contributed for the occasion by members and friends. With the nucleus of good pictures which it already possesses, it will not, I trust, rest satisfied until it has founded a permanent picture gallery of its own, and made arrangements also, as far as practicable, for obtaining casts of the principal

statues and other sculptured works of antiquity. It may, I feel sure, count on the support of the public being given to its efforts. This is not the first Colony in which it has been my good fortune to aid in ushering into existence a project of this sort, and I was gratified the other day at receiving from Melbourne a report showing that the gallery which I opened there a few years ago, has from small beginnings acquired, through the judicious investment in Europe of annual subscriptions and grants from the Legislature, a really valuable collection of paintings. I believe that quite as strong a taste for art exists among the inhabitants of the Cape Colony, and I am sanguine, therefore, as to the success that will ultimately crown the labours of the South African Fine Arts Association."

We also trust that the work so well begun, will meet with a hearty support from the public, and we can confidently recommend all who have not yet visited the Gallery to do so before the Exhibition closes, for they will find much to interest, please, and instruct.

Lost, and Not Found.*

A long, lone distance from the haunts of men,
High up amidst the wild Inanda slopes,
Looking seawards, a rustic dwelling stands.
In front, alternate change of hill and vale,
Which merge and melt into the ocean's blue ;
Behind, one humble cot, a deep ravine,—
Haunt of baboons and other noisome beasts ;
Beyond, again, a still, grand mountain range,
With sombre peaks struck out before the sky
Like ebon columns 'gainst an opal wall.
At times a softer aspect breaks their gloom,
When golden tributes from the sunrise pay
A wealth of smiles, to woo them from their frowns.
Here, 'mid these scenes, one lovely homestead holds
A human link with nature's vast expanse.
A simple-hearted man the owner lives
Feeding his flocks upon the neighbouring hills,
Content to earn his bread by honest toil.
So speeds the week, and when the Sabbath comes,
He takes his rest in good old-fashioned sort :
His Bible gives him all the light he needs ;

* From an extremely modest communication accompanying this poem from the authoress we extract the following passage :— "If it is not worthy of insertion do not trouble to return it. I shall know of its fate by its non-appearance. The contribution has at least the merit of being founded on fact. Between ten and twelve years ago, a little child was lost among the Inanda Mountains, and from that time to this has never been seen or heard of more." Our appreciation of the poem is shown by the production of it in these pages.— Ed. *C. M. M.*

He tampers not with doubts, beliefs, or creeds,
But reads, undoubting as a little child—
Rejoiced to know and feel that God is good!
His wife is one with him in all his hopes;
Hand in hand walk they to the promised land.
Two children came to wake their loneliness,
And bind them to the interests of their kind;
Two sturdy boys, of sturdy limb and heart,
Who bade to make light work of up-hill life;
Too young, howe'er, as yet to know its toils.
The elder one had scarce eight summers seen,
Yet proudly claimed the lead and right of years.
Wild and untamed as hares, from morn till eve
They rambled forth in search of fruits or birds;
Or set their traps to catch the wild field-mouse;
When tired of this would build themselves a house,
And make believe pretending they were lost,
And chuckle then to hear their mother's call,—
Soon followed by the father's louder tones,
Till rock and cliff would echo back the cries,—
Then out they'd rush, their faces running o'er
With glee, unsobered by parental threats,
That half in earnest, half in play were made.
And then what gladsome times when birthdays came;
For then their little friends would come from far
To wish them joy, and taste the yearly cake,
And fresh from school, well near beside themselves
To breathe their freedom with the mountain air.
One day they scampered off, like restive colts,
And hied them on in wanton search of fun,
Till tiréd out, they turned their footsteps home.
When nearly there the younger of our twain,
Worn out, flung down upon the soft cool grass;
And spite the threats that he would there be left,
Still petulantly pouting, would not move.
"Let's leave him" then, the elder brother cried,
"He soon will follow when he sees us go,"
And so they turned, then lingered, looking back,
Expectant of their comrade's swift pursuit:
But still he lay. At last they hurry on,
By hunger sped, and calling loud for food,
Like greedy fledglings to the fountain head
They go, unheeding more their playmate's fate,
Till with maternal instinct's swift alarm
The mother misses soon her darling's form,
And quickly turning to the little groups
With sudden fear, she asks them "Where is he?
Go bring him here, and if he still refuse

Say mother wants him! then he'll surely come."
Away they go, and shouting long and loud,
They reach the spot whereon he'd thrown him down,
To find the truant gone. Where can he be?
With hands before their mouths, like trumpets shrill
They send their little voices far and wide;
And search and pry into his favour'd haunts,
Calling him by his name half coaxingly,
To draw and fetch him from his hiding place:
But still no answer came. Then with slower steps,
And faces quieted by dawning fear,
They go to tell their unsuccessful quest.
The mother then, her terrors fairly roused,
Like plaintive ewe in search of wandering lamb,
Gives utterance to her tenderest tones,
And thinks her love at least will find the lost,
And wondrous instinct's power must lead
And guide him back into her yearning arms.
Alas, her heart! she little knows the woes
Which stealth'ly creep, like unrelenting thieves,
To rob and spoil her of its calm repose.
The father coming back, his day's work o'er,
Asks of his son, and where the merry laugh
So wont to greet and welcome his return.
None make reply, but glancing each to each,
One hopes the other will be first to speak.
The mother rushing back, distraught and pale,
Speechless of words, yet eloquent with grief,
Signals distress and beckons to her mate;
Who filled with qualms himself yet strives to calm,
And soothe with gentle words her dire distress.
Meanwhile, the dreaded night begins to close,
And as the day-light dies, so die their hopes.
Still goaded on by torture of despair,
All through the black, black hours they make their search.
Now and anon they pause and call aloud;
And as the echoes softly make reply,
The mother hopes and thinks she hears her boy;
Then on she'd press, till utterly o'erwraught
She turns, and ere she gains the threshold floor,
Exhausted falls upon her hands and face,
And for a space is dead to all her woes.
And now the husband mounts his fleetest horse,
And pushing on he gains the nearest town.
Full soon his tale is known, and soon his friends
Equip themselves to lend him all their aid.
The worthy magistrate issues command
That all the natives near the spot be told

To muster with their dogs, and shields, and spears,
And scour the country round for ten good miles,
And leave no stone unturned or hole unsearched.
With loud halloo and mighty whoops they come,
And leap and jump as on their way to hunt;
And like a host of Bedlamites let loose,
They shriek and fill the air with hideous sounds:
Like hairless apes they reach from cliff to scar,
And twist and wriggle into every niche,
Moving along with serpentine-like glide.
At last, not very distant from the house,
A long, sharp, thrilling shout is heard to come,—
A trace is found! a little half-worn shoe!
Which, when the mother sees, her pent-up tears
Out-gushing melt and burst their frozen bounds.
She clasps the little relic to her breast,
And sobbing, murmurs foolish, tender things:
A little ray of hope comes stealing o'er her face,
As when the moon is breaking through a cloud;
But like a tiny spark it dies away
As still the dreary hours do come and go,
Each coldly tolling louder than the last
The cruel, cruel death knell of the lost.
At last, when every chance of life is flown,
One makes proposal that the grass be burnt,—
That should the little ashes then be found,
They might at least have sacred burial.
The mother shrieks at first at such a thought,
But afterwards shuddering gives consent;
And soon the country, blazing far and wide,
Is one vast sea of greedy, hungry fire,
Which shot and leapt into the air as though
Rejoicing in the fiat to destroy,
And leaving in its march a ghastly pall.
The natives dance around the blacken'd heaps,
And searching toss them into flames again,
But still no further trace is found; and now
When all is done that human aid can do,
With bated breath the friends approach the pair,
Who sit with bowéd heads, voiceless and wan,
Mutter some words, then slowly creep away,
As if ashamed to find themselves so weak,
So impotent to comfort the bereaved.
And now long years have flown since then,
And brought no tidings of the missing one;
Rumours have come that in the far, far north,
Not long ago, amidst a savage tribe,
Was seen by one who thither went to trade,

A gaunt and swarthy youth, naked and wild,
And yet of European make and form,
Who strode amongst the rest with lofty mien,
As though he knew he came from better kind—
Since proven, tho', to be the joint-offspring
Of dusky African and English blood.
Another story goes, that hid away
And mouldering beneath a stone was found,
By a herd driving out his flocks to graze,
The tiny skull of a poor little child:
But this was taken to one of the wise
Who skilled in the cunning of nature's lore
Spoke it as fashioned of the Kafir mould.
This little last link with the lost is all
That has e'er been found, or seen, or heard of.
The mother long since has bowéd to the will
Of Him above, who ruleth over all!
She knows she'll learn—all in His own good time—
Her darling's fate, now gone but for a while—
Trusting his steps have been directed right,
Hoping with faith in the Almighty love,
That, dead to her, he still doth live to God.

Cape Town Revisited.

BY AN OLD TRAVELLER.

SECOND DAY—Tired by my rambles on the first day of my landing, I was rather late on foot on the morning of the second, but on this occasion an old friend having volunteered to act as a kindly Cicerone in my explorations for my comfort and support during the day, and under his guidance I proceeded towards the Government Gardens and Public Library. Here I was sorry, as Paddy would say, to find that progress had gone backward The entrance to the gardens looked particularly slovenly and neglected, while the vile stench emanating from the mouths of drains, one at each side of the entrance, where

> Filths of all odours seemed to tell
> What streets they sailed from by their smell,

was noxious in the extreme, and quite enough to poison the gentlemen who dwell all day in the adjacent Government Offices, although the old Malay apple women who sit at each side of the gateway seem to thrive on it. The beautiful avenue itself, although still leafy and green, seemed to wear an aged and prematurely withered aspect, and I was concerned to see so many trees exhibiting signs of unmistakable decay, and many more, especially those bounding the site of the new

Houses of Parliament, condemned as victims to the woodman's axe. One especially, a fine old mimosa, a particular favourite of mine years ago, and which might have been planted by Van Riebeck himself, I found succumbing as I passed. "Woodman," said I, in a solemn tone "spare that tree, in youth it sheltered me," &c. "Sorry, master," said the woodman, "I'm not able to oblige you; the Public Works says it must come down, and down it's coming, even if it had sheltered your grandmother." I passed on musing as to how all the romance is going out of the world, especially in Public Works Departments.

I can be hardly expected to pass an opinion on the site chosen for the new Houses of Parliament, but with the exception of its propinquity to the Public Offices, I see very little in its favour.

I now approached the new Library and Museum buildings; at least they were new to me, as although I had helped to lay their foundation stone, and build them afterwards, they had not been completed when I last left the Cape, and I confess I felt very much disappointed. From the avenue itself there is no point of view attainable, and the *facade* visible from the Botanic Gardens is sadly wanting in dignity and height; the central portico wants greater elevation, so as to break the tame horizontal lines of the roof, whose hideous skylights are too palpably revealed in the slope of the too visible slate work. The want of entasis or swell in the outline of the pillars quite mars their effect, and, on the whole, it shows the public that many a showy building looks much better on paper than it does in reality. The fence surrounding and the entrance gates both to Library and Museum are very disreputable indeed, and their very beggarly and dilapidated appearance would disgrace the approach to a Canadian shanty or a Connemara cabin. The flights of steps at the entrance, and the pavements of the stoeps, have also been allowed to fall into a sad state of decay. As the building, we presume, is a public one, we conceive that it can be hardly expected that small and insufficient grants voted annually to these institutions can be expended in performing the necessary repairs to the buildings, but that these repairs should be undertaken by the Public Works Department as is done by Board of Works in London to the British Museum and all other public buildings. Indeed, the whole *ensemble* of the groupe and its surroundings is poor, in spite of the beautiful garden in front, where the statue of poor Sir G. Grey rather reminds one of a white owl peeping out of an ivy bush. Could not some small economies be practised on our general expenditure so as to allow a small sum to be devoted to keep these noble institutions in a cleanly and respectable condition? Every sacrifice should be made for this purpose, by carrying out a financial reform in many of our superfluous luxuries.

The interior of these buildings is in a much more satisfactory state. The Library, thoroughly comfortable, nay, luxurious, and the portly figure of my old friend, Mr. Maskew, throws a well-to-do air over the whole concern, showing that the official salaries as yet

are not cut down to the starvation point. I was also pleased to see another old friend, Dr. Bleek, living in the atmosphere he most delights in,—he being, like Dr. Johnson, a man capable of grappling with vast libraries. I was glad to see one gallery already erected in the Museum, and trust soon to see another, as it is really getting overcrowded ; and I here venture to express a hope that another worthy member of the same family who so nobly presented to the Library its very beautiful shelves and book-cases will, in a similar spirit of liberality to the Museum, present that institution with the still deficient second gallery. I recognised several old friends of mine amongst the wild beasts and beastesses in the Museum, and almost fancied that the two skeletons hanging behind the door gave me a grim nod of recognition. But one old friend I could not see, I mean the mangy old Tapir, with the whitewashed back. Has he dropped to pieces, and are his remains consigned to the Golgotha down stairs, or is he buried in some of the obscure recesses of the glass cases? No matter. Although, perhaps, not quite at home amongst our African pachydermata, felidæ, and antelopes, we could have better spared a better beast.

My aged companion and myself next proceeded up the Gardens, and after a peep at the "Botanical" which I regret to have found so deserted, and on, too, so lovely a day, I felt a strong desire to offer myself to Mr. McGibbon, the Curator, as a show hermit if he would only construct a fair and proper grotto for my accommodation, and furnish me with a daily return of dry bread and watercresses, when I have no doubt my venerable and antiquated appearance with luxuriant beard and appendages would have the effect of drawing many admiring spectators on Sundays and holidays, (if opened on the former), from the high church locality of St. George's.

Bidding good bye to Mr. McGibbon, most excellent of curators,—and I am sorry to say I fear the construction of the Museum buildings has rather tended to the desiccation of the Botanic Gardens by the large drains running over its site, which carry off the surface water too rapidly—we then proceeded up the Gardens, where I found to my great pleasure that gas-lights were at last introduced.

The next old friends I stumbled over were the pair of hideous nondescript "bastes" who grace the piers of the South African College. They struck me as if time had not improved their appearance or temper: the brute on the left hand with a hideous leer seemed to say, "We once keepit a Schule, but now they ca'it a University."

Kafir Nursery Tales.

No. II.

THE RUNAWAY CHILDREN, OR THE WONDERFUL FEATHER.

Once in a time of famine a woman left her home and went to live in a distant village, where she became a cannibal. She had one son, whose name was Magoda. She ate all the people in that village, until only herself and Magoda remained. Then she was compelled to hunt animals, but she caught people still when she could. In hunting she learned to be very swift of foot, and could run so fast that nothing she pursued could escape from her.

Her brother, who remained at home when she left, had two daughters, whom he did not treat very kindly. One day he sent them to the river for water, which they were to carry in two pots. These pots were made of clay, and were the nicest and most valuable in the village.* One of the girls fell down on a rock and broke the pot she was carrying. Then she did not know what to do, because she was afraid to go back to her father. She sat down and cried, but that did not help, the pot would not be whole again. Then she said to her sister, "Let us go away to another place, where our father will not be able to find us." She was the younger and the cleverer of the two, and so she persuaded her sister. They walked away in the opposite direction from their home, and for two days had nothing but gum to eat. Then they saw a fire at a distance, and went to it, where they saw a house. It was the house of their aunt, but they did not know it. They were afraid to go in, but Magoda came out and talked to them. When he heard who they were, he was sorry for them, and told them their aunt was a cannibal, giving them advice not to stay there. But just then they heard her coming, so they went into Magoda's house and hid themselves, for he lived in one house and his mother in another. The woman came and said, "I smell something nice; what is it my son?" Magoda said there was nothing. She replied, "Surely I smell fat children." But as she did not go in, they remained concealed that night.

The next morning Nomagoda (so called because she was the

* The art of making earthenware vessels is one which is gradually being lost in South Africa. The manufacturers find that, with one-twentieth part of the labour required to make a stone jar, they can procure the means of buying a wooden cask, which will answer the same purpose. The large jars are consequently disappearing; and if our museums are not already supplied with specimens, it will be found increasingly difficult to obtain any of the more beautifully finished ones the longer their purchase is neglected. The labour of making them is very great. The clay was, of course, all worked by hand, and yet their form is nearly as perfect as if they had been turned on a wheel. The ornamentation was effected by each mark being the result of a separate impression, as no moulds were used, yet the patterns are surprisingly regular. When they were thus finished, after a great expenditure of time and patience, many were lost in baking, as the slightest flaw or accident would cause them to burst during that process. Small ones, holding up to a couple of gallons, are still made, however, in considerable numbers.

mother of Magoda)* went out to hunt, but she did not go far, so the children could not get away. They went into her house, where they saw a person with only one arm, one side, and one leg. The person said to them, "See, the cannibal has eaten the rest of me; take care of yourselves." When it was nearly dark, Nomagoda came home again, bringing some animals which she had killed. She smelt that children had been in the house, so she went to her son's house and looked in. She said to Magoda, "Why do you not give me some; do I not catch animals for you?" Then she saw the children, and was very glad. She took them to her house, and told them to sleep. They lay down, but were too frightened to close their eyes. They heard their aunt say, "Axe, be sharp, axe, be sharp," and to let her know that they were awake, they spoke of vermin biting them. After a while the cannibal went to sleep, when they crept out, first putting two blocks of wood in their places, and ran away as fast as they could. When Nomagoda awoke, she took the axe and went to kill them, but the axe fell on the blocks of wood.

As soon as it was day, the cannibal pursued the children. They looked behind, and saw clouds of dust which she made as she ran. There was a tall tree just in front of them, so they hastened to climb up it, and sat down among the branches. Nomagoda came to the tree and commenced to cut it down, but when a chip fell out a bird (Ntengu)† sang some words, and the chip then went back to its place and was fast again. This happened three times, but Nomagoda, who was very angry, caught the bird and swallowed it. When she put it in her mouth, one of the feathers dropped to the ground. Then she began to chop at the tree again, but as soon as a chip was loose the feather called out *ntengu*, *ntengu*, *macetyana niti nama*, and the chip stuck fast again. The cannibal chopped till she was tired, but the feather continued to keep the tree from receiving harm. Then she tried to catch the feather, but it flew about too quickly for her, until she sank down exhausted on the ground at the foot of the tree.

The children, up in the branches, could see a long way off, and as they strained their eyes, they observed three dogs as big as calves, and they knew these dogs belonged to their father, who was seeking for them. So they called them by name, and the dogs came running to the tree and ate up the cannibal, who was too tired to make her escape. Thus the children were delivered, and their father was so glad to get them back again that he forgave them for breaking the pot and running away.

* When a Kafir woman is married, her husband's parents give her a new name, by which she is known to his family ever after. Upon the birth of her first child, whether son or daughter, she is called by everyone else after the name given to the child, "the mother of so-and-so."

† The ntengu is the "blackbird" of the frontier. It is rather larger than a swallow, and is of a bright blueish-black colour. It may often be seen on the backs of cattle, seeking for insects on which it feeds.

[There are three or four versions of this story, but all agree in the main points. In one, it is the grandmother of the children who is the cannibal, in another, it is their mother, and in a third it is the husband of their aunt. One version makes Magoda escape with the children, and introduces a great deal of obscenity. The parts referring to the bird and the manner of the children's delivery are the same in all. So also is the episode of the broken pot, but the conversation between the two girls differs in some respects.]

THE STORY OF MBULUKAZI.

There was once a man who had two wives, one of whom had no children, in consequence of which she was not loved by her husband. Her name was Numbakatali. The other wife had one daughter, who was very black, and several children besides, but they were all crows. The one who had no offspring was very downcast on that account, and used to go about weeping all day. Once when she was working in her garden, and crying as usual, two doves came and perched near her. One of them said to the other, "Dove, ask the woman why she is crying." So the dove questioned her. She replied, "It is because I have no children, and my husband does not love me. His other wife's children are crows, which come and eat my corn, and she laughs at me." The dove said "Go home and get two earthen jars, and bring them here." Numbakatali went and got them. Then the doves scratched her knees till the blood flowed, and put the blood in the jars. The woman gave the doves some corn to eat, after which she took the jars home to her hut, and set them carefully down in a corner. Every day the two doves came to be fed, and always told the woman to look at what was in the jars.

At last, when she looked one day, she saw two children, one a boy, the other a girl, and both very handsome. She was very much delighted at the sight, but she did not tell anyone. When the children grew a little she made a snug place for them in the hut, where they were to sit all day, because she did not wish them to be seen. Always before she went to her work she charged them not to go out, and as her husband never came to see her, no one knew of the existence of these children except herself and a servant girl. But one day, when they were big, she went out, and after she was away some time, the boy said to his sister, "Come, let us help our mother by bringing water from the river." So they went for water, but they had not reached the river when they met a company of young men with a chief's son, who was looking for a pretty girl to be his wife. The young chief was called Broad Breast, because his chest was very wide, and it was also made of a glittering metal that shone in the sun. These men asked for water to drink. The boy gave them all some water, but the young chief would receive it only from the girl. He was very much smitten with her beauty, and watched her when she left, so as to ascertain where she lived.

As soon as the young chief saw the hut that the girl went to, he

returned home with his party and asked his father for cattle with which to marry her. The chief, who was very rich, gave his son many fine cattle, with which the young man went to the girl's mother's husband, and said, "I want to marry your daughter." So the girl who was very black was told to come, but the young chief said, "That is not the one I want; the one I saw was lighter in colour and much prettier." The father replied, "I have no other children but crows." But Broad Breast persisted, so the man called his wives, both of whom denied that there was such a girl. However, the servant girl went to the man and privately told him the truth. In the evening he went to his wife's hut, and to his great joy saw the boy and his sister. He was so delighted that he remained there that night, and after talking about it with his wife, he concluded to let Broad Breast marry the girl.

In the morning a mat was spread in the yard, and the young chief was conducted there. The two children, and the servant girl who told their father about them, were also called, and they all sat down on the mat. The young chief, as soon as he saw her, said, "This is the girl I meant." He stayed part of the day, and then with his attendants went to his father for more cattle, which, when he obtained, he came back to the father of the girl.

The mother of the very black girl and the crows was very jealous when she saw such a fine young chief coming with so many cattle. She wanted her daughter to be the one who was to be married; so she dressed her as fine as she could, but she had no such pretty clothes as the other girl had. Her name was Mahlunguluza, for she was called after the crows, who were the other children of her mother. The pretty girl's name was Mbulukazi, which name was given to her because her handsome dress was made of the skin of a mbulu.*

The mother of Mahlunguluza spoke to the young chief about her daughter, and so he married both the girls. Their father gave to each an ox, with which they went to their new home. Mbulukazi's ox was a pretty young one, and Mahlunguluza's ox was an old and poor one. When they arrived Broad Breast gave to Mbulukazi a very nice new house to live in, but to Mahlunguluza was given an old one quite in ruins. Then the very black one saw she was not loved, and she became jealous, so she made a plan to kill her sister. One day she told her she heard their father was sick, and proposed that they should go to see him. Mbulukazi consented, and as soon as they obtained leave from their husband they left. Their road led them past a high precipice, below which was a deep pool of water. Mahlunguluza lay down on the rock, and said, "Come, see what is here in the water." Her sister lay down with her head over the

* The mbulu is a fabulous creature which has the power of assuming the form of a human being, but cannot part with his tail. It is frequently spoken of in Kafir story, and firmly believed in by little folks. Its tail possesses wonderful powers, according to many of these stories. In the present tale some versions have it that Mbulukazi was so called because her dress was given to her by one of these creatures; but the above is the usual form.

edge of the rock, when Mahlunguluza jumped up quickly and pushed her over. Mbulukazi sank in the water and was drowned. Then the very black one returned home, and when her husband asked where Mbulukazi was, she said that she was still with their father.

The next day the ox of the drowned one came running to the village and walked about lowing for a while, after which it tore down the old ruined house of Mahlunguluza with its horns. Its actions attracted the notice of the men, and they said, "Surely this ox means something, why is it doing this?" Then it went to the deep pool of water, the men following it; it smelt all over the rock, and then jumped into the water and brought out the corpse of Mbulukazi. The ox licked her till her life came back, and as soon as she was strong once more, she told what had happened.

They all went home rejoicing greatly, and informed Broad Breast. When the young chief heard the story he was angry with Mahlunguluza, and said to her, "Go home to your father; I did not even want you; it was your mother who brought you to me." So she had to go away in sorrow; and Mbulukazi remained the great wife of the chief.

T.

Victoria East, May, 1875.

Dr. Cohen on Peculiar Melaphyric Amygdaloids from South Africa.

In a late letter from Dr. Cohen, that gentleman has communicated to me the progress in some details of his investigations into the mineral structure of the collections of rocks made by him in his tour through South Africa. It may be not generally known that Dr. Cohen's journeys were rather extensive in the Colony, Free State, Transvaal, and Diamond-fields; and as he intends publishing, bit by bit, the results of his laboratory investigations on these journeys, I propose to put abstracts on record in the *Cape Monthly*. He has already published an elaborate paper, with illustrations, on the geology of the surroundings of Cape Town; and even on so well trodden a field, he has broken new ground. I shall take an early opportunity of setting forward an abstract of this paper. Meanwhile, however, as bearing on the geology of the Transvaal and the Diamond-fields, the paper heading these remarks is of greater importance at present.*

It appears that Mr. Joseph Orpen (who has rendered much good service to the natural history of the Colony in several departments) sent specimens

* *Ueber einige eigenthümliche Melaphyr—Mandelsteine aus Süd-Afrika*, von Herrn Dr. E. Cohen in Heidelberg. *Separat-Abdruct aus dem Neuen Jahrbuch für Mineralogie, etc.*, 1875.

of a singular Amygdaloid rock from the Maluti Mountains. This kind of plum pudding stone, as it is popularly called, has embedded in it, instead of almond-shaped, *pipe-stem-like* crystals. It is of a reddish brown colour, and from what Mr. Orpen says, is as a rock limited to the Maluti Mountains with the exception of the isolated Wittekoppen to the north of Harrismith. The tract of the Maluti Mountains, where it occurs, may be defined as extending from the sources of the Caledon River to the sources of the Orange River, and thence to those of the Craai River, which runs into the Orange River at Aliwal North.

Then as to its mode of occurrence and its general appearances—"Whilst the Drakensbergen are formed by the sides of the Tableland with flat heights of sandstone, the sandstone layers of the Maluti Mountains are crowned by this layer of reddish brown Amygdaloid." The pipe-stem-like crystals, which are white, branch through the Amygdaloid, and form root like clusters. They vary in length from two inches to two feet, and they are of the thickness of a "good stout pencil." They run as a rule vertically through the rock, and occur very thickly, indeed ramifying in it as the "roots of a crop in a field."

Dr. Cohen's explanation of the origin of these pipe-stems will be generally endorsed by mineralogists. The rock containing these is undoubtedly of igneous origin, and is "permeated by veins of basalt,"* according to Mr. Orpen. Dr. Cohen classes it with the melaphyrs. The pipe-stems, he considers, have been caused by bubles of gas, which were in the rock in its original molten condition of lava. These by slowly ascending and ramifying would, in a toughish lava, cause cylindrical and branching cavities, which afterwards by segregation from the surrounding mass, as in the case of other Amygdaloids, came to be filled with the pipe-stem formed Heulandite.

From the ramifying appearance and root like structure of these, he had to conclusively establish their inorganic character. He examined their structure microscopically and found nothing to warrant a coraline or other organic origin.

Dr. Cohen in the same paper refers to and gives an account of the Amygdaloids of the Vaal River. All diggers, who worked along the Vaal, are familiar with what they called "pipe-stones" of a dull crystal glance so abundant in the wash from the cradles. Although the Amygdaloids of the Vaal do not contain pipe stems, he says, but in very few cases, he is

* Dr. Cohen here puts in a foot-note concerning this "These veins *are probably diabases as almost everywhere in South Africa.*

of opinion that the Upper Vaal must have on account of the frequent occurrence of pipe-stems of Chalcedony in the alluvial of the river an Amygdaloid of an analogous character to that of the Maluti Mountains. It will be remarked, however, that the pipe stems are of Chalcedony in the Vaal specimens, and not Heulandite. The Vaal Amygdaloids are all chaledonous.

It will be some gratification to those interested in the geology of the Cape to know that Dr. Cohen has declined the offer made by the German government to accompany their expedition to the Loango as geologist and mineralogist; since his acceptance of this would indefinitely defer the prosecution of his studies on the geology of South Africa. When his work is completed, the geology and mineralogy of South Africa will be tolerably well known from Cape Town to Delagoa Bay.

JOHN SHAW.

Mr. Baines.

By recent advices from Natal we deeply regret to learn of the death of Thomas Baines, the distinguished Traveller and Artist, of whom elsewhere we wrote that "a better man we never knew;" and, moreover, that "for pluck as an explorer, for skill as an artist, and graphic power as a writer, for the most perfect guilelessness and simplicity and purity of personal character, he deserved infinitely higher honours than had ever been accorded him."

We have no space this month to write of him what we wished, and shall certainly do in the next number of this periodical, to which he was a frequent contributor. He died while almost at the very commencement of his last intended journey to the Tatin and Sofala. The present writer having met him recently at Port Elizabeth, attempted to dissuade him from the undertaking. His mind, however, was made up, and he ventured and died. We give the following extracts from the last two letters received from Mr. Baines, as thoroughly illustrative of the real character of this brave good man:—

Port Elizabeth, Jan. 25, 1875.

* * * With regard to the subject on which we were speaking, I have thought pretty much since we met, and I do not see that I can materially alter my views or my plan of action, although I may modify the details, according to advice or force of circumstances. If I consulted my own feelings, I would rather be an artist than a gold-digger, and would rather travel

as an artist and explorer than as a gold-seeker. The position I now hold was not chosen by me. I was sent out to find and acquire the right of working in the gold-fields, and I have been so far successful that but little more is wanted to make me completely so. I do not care much about making a fortune out of the gold ; if profit comes to me as the reward of my work it would be Quixotic to refuse it ; but if it does not, I am contented to live by my pencil. My chief motive in sticking to the work is that I believe it to be my duty—it has, unsought, been placed in my way. I have brought it successfully very near to completion, and now I have to choose between making another effort to attain success, or deserting my post and allowing all the labour of my past five years to become a miserable failure. Another thing is, though I cannot bring myself to make a trade of philanthropy, and fill my letters or conversation with the catch-words which are used alike by real philanthropists and by speculators whose only object is to enrich themselves, I hope I have as much hatred of slavery, of tyranny, and oppression, and as much love of fair play to black *and white too*, as any of my countrymen. I know well enough that the introduction of civilization, and even of religion, among the natives, is not unmixed with evil ; yet I believe that the good so far preponderates as to justify us in doing what we can for its advancement. I feel that an opportunity of giving some assistance in this direction is placed before me, and I should fail in my duty if I neglected it. Besides this, and what I expect you will say is at the bottom of it all, I have some share of our national dislike to being beaten. I do not feel that this is the case with me ; yet, on the contrary, if I do not succeed this year, I have every reason to hope that another year of exertion will pull me through. If I fail after having done my best, I may, without shame, acknowledge my defeat ; if I abandon the contest when another stroke might have secured the victory, I shall feel very differently. * * *

Port Elizabeth, Feb. 19, 1875.

My Dear Mr. Noble,—At last I think I see my way clear to the commencement of my journey. You know I had made up my mind that I could not draw back without laying myself open to the reproach of others whose failure of duty would not be a sufficient excuse for mine.

The Rev. W. Greenstock has long been anxious to accompany me, and when I thought I was to have an outfit provided me, I gladly accepted his companionship. At present I could not even sufficiently equip myself ; and my utmost hope was that I should reach the farm of my friend

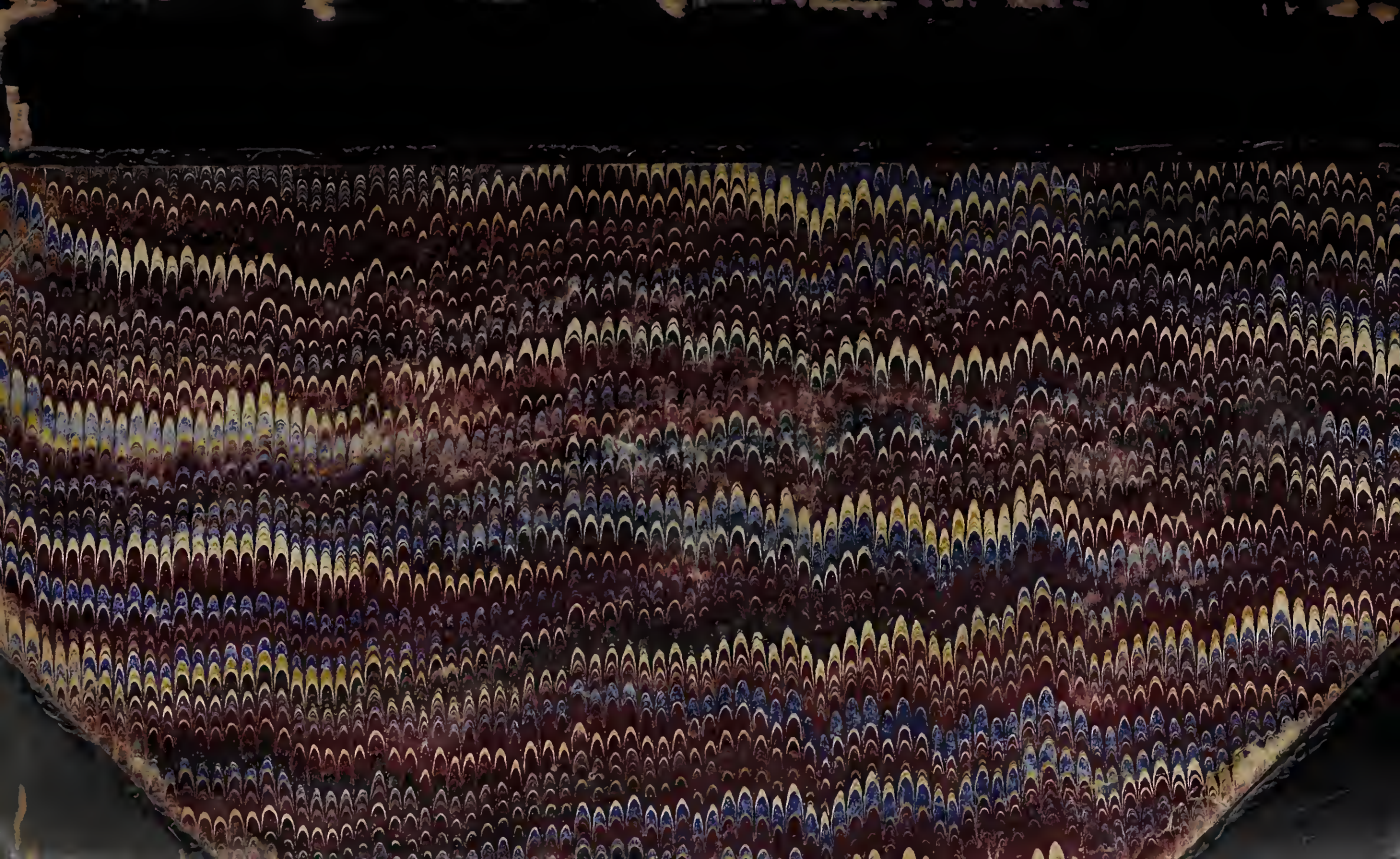
Jennings at Blaauwe Bank, and by letting him have my battery to test his reef, and by a few months' painting, enable myself to go on next year.

Mr. Greenstock, however, now tells me that the Society for the Propagation of the Gospel will allow him a small sum for travelling expenses; and we hope, by uniting our funds, with *very* strict economy, to equip ourselves so as to perform the whole journey. One object of Mr. Greenstock's is the re-establishment of his health by a year's travel in the bracing mountain air which we shall enjoy during a great part of our journey. And then, and not the least, is to gain such information as may be useful to his Society in extending its operations.

You know I do not like making a parade of philanthropy, but I hope I am not deficient in English spirit or Christian feeling; and you will believe me when I say I feel most gratefully the privilege of being a humble assistant in a work like this.

I think of leaving for Natal by the steamer of the 27th, if possible, so as to prepare for starting early in March. I have sent to Cape Town for a trocheameter, so as to carry on my geographical observations. Mr. Greenstock is also interested in geography and general science, and desirous of assisting me in observation, so that I trust to have great pleasure in his companionship. He wishes also to make the journey to the ruined cities and to Sofala—and this I shall also be very glad of; but it is impossible to say anything *certain* of this extension of the journey until that to Matabili Land has been successfully accomplished.

I am told that the number of subscribers to the new book exceeds 720, and among them are the names of seven Kafirs;—one of them is a minister in one of the native churches, the station of the others I do not know, but they must be men of some education to subscribe for the purchase of a book before publication. I never heard of native Kafirs having done so before; and I hope it may be accepted as a small sign of the elevation and improvement that seems to have taken place since we knew them as savage warriors spreading desolation over the frontiers of the Colony.

Handbook of the Cape Colony.

We have received a copy of the Descriptive Handbook of the Cape Colony, prepared under the auspices of the Government, by Mr. John Noble, the Clerk of the House of Assembly. It is a most creditable production, both as to its matter and its appearance,—including a valuable map and admirable lithographic illustrations. We shall give a detailed review in our next, both of this work and the other issued in London as one of Silver & Co.'s Colonial Series.